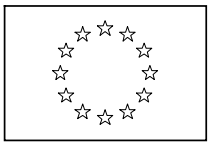

COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 12.12.2001
COM(2001) 756 final

# REPORT FROM THE COMMISSION

## Research and technological development activities of the European Union
## 2001 Annual Report

COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 22.02.2002
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Concerne la version anglaise.

# REPORT FROM THE COMMISSION

## Research and technological development activities of the European Union
## 2001 Annual Report

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**Research and technological development activities of the European Union**
**2001 Annual Report**

## LEGAL BASES FOR THE ANNUAL REPORT

Treaty establishing the European Community, Article 173:

"At the beginning of each year the Commission shall send a report to the European Parliament and the Council. The report shall include information on research and technological development activities and the dissemination of results during the previous year, and the work programme for the current year."

Decision No 182/1999/EC concerning the 5th Framework Programme (OJ L 26, 1 February 1999), Article 5:

"The Commission shall regularly inform the European Parliament and the Council of the overall progress of the implementation of the framework programme and the specific programmes."

Decision No 1999/65/EC concerning the rules for participation (OJ L 26, 1 February 1999), Article 24:

"The annual report which the Commission sends to the European Parliament and the Council in accordance with Article 173 of the Treaty shall contain information on the implementation of this Decision."

## SOURCES OF FURTHER INFORMATION

- *Annual Monitoring Reports* published each year for the Framework Programme and each specific programme, which provide concise, independent feedback on the progress and quality of the measures taken to implement the programmes.

- *Five-year Assessment Reports* published every fourth year, both for the Framework Programme and for each specific programme, which present an independent retrospective evaluation of the relevance, efficiency, results and impact of the European Union RTD programmes.

- *The European Report on Science and Technology Indicators,* which contains descriptions, statistics and detailed analyses of European and national RTD activities in the world context.

- *Research and Development: Annual Statistics* (Eurostat): an annual publication containing comparable international statistics on R&D expenditure, R&D personnel and patents in the Member States, broken down by regional level.

- *R&D and Innovation Statistics* for the candidate countries and the Russian Federation (Eurostat).

- *Statistics on Science and Technology in Europe* (2000 edition). Published as part of the "Panorama of the European Union" collection (Eurostat).

- *Statistics in Focus* under the theme "Science and technology" (Eurostat).

- The Commission's *annual budgetary documents,* i.e. the preliminary draft budget, the budget, the consolidated revenue and expenditure account and the balance sheet.

– *Studies and analyses* published in connection with the Community RTD programmes and addressing issues specific to the fields of RTD which they cover.

Most of these documents can be obtained or ordered from the Commission's Internet sites:

– The Commission's general EUROPA site: http://europa.eu.int

– The CORDIS site containing information on the Framework Programme: http://www.cordis.lu

– The Commission Directorate-General for Research site: http://europa.eu.int/comm/dgs/research

– The Commission Directorate-General for Information Society site: http://europa.eu.int/comm/dgs/information_society

– The Commission Directorate-General for Enterprise site: http://europa.eu.int/comm/dgs/entreprise

– The Joint Research Centre (JRC) site: http://www.jrc.org

– The EUROSTAT site: http://europa.eu.int/comm/eurostat

Extensive information on European Union policies can be found on these sites, and, in particular, on the CORDIS site which is devoted to the RTD Framework Programme and on the sites of the Directorate-General for Research and of the other relevant Commission departments, all the reference documents, the texts of calls for proposals and a host of other information, in line with the Commission's transparency and information policy.

**Further information can be consulted on line at http://europa.eu.int/comm/research/report2001.html:**

– **Additional statistics on the proposals received, selected and funded in 2000**

– **an annex that sums up the science and technology activities in 2000 and the plans for 2001 for each of the specific programmes under the 5th Framework Programme.**

**SUMMARY**

This annual report on the European Union's research and technological development activities covers a period which marked a turning point with the launch of two major political initiatives: the discussions on creation of a European Research Area and the preparations for the new RTD Framework Programme for 2002 to 2006. At the same time, the 5th Framework Programme accelerated to full speed in 2000.

In its communication *"Towards a European research area"* the Commission drew the alarming conclusion that the European Union is losing ground to its main rivals in the research and development race. The Commission consulted institutions, industry and scientists on a series of courses of action to make European research more dynamic by opening up activities at regional, national and European levels and coordinating them more closely to make more efficient use of the available resources. The Heads of State and Government endorsed this approach at the Lisbon European Council with a view to turning Europe, in the next ten years, into "the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion." The Commission's analysis of the situation and the courses of action which it proposed were backed by the European Parliament, the Council and the other institutions and by the opinions expressed by the scientific community and industry.

The first steps have already been taken towards making a reality of the European Research Area, with work in progress on introducing a Community patent, benchmarking national research and innovation policies, mapping scientific excellence in Europe, networking national research programmes, evaluating the level of mobility amongst researchers in Europe and identifying the obstacles to mobility.

The measures to implement the 5th RTD Framework Programme in 2000 focused mainly on adaptation of the work programmes to the objectives of creating a European Research Area, particularly by reinforcing the concerted action and thematic networks. Boosted by a substantial increase in the total value of the contracts signed (around €3.9 billion), the impact of the Community's research activities is becoming tangible within the EU and relations with the associated countries and other partners are growing closer. In the thematic programmes the average Community contribution to the shared-cost actions now stands at around €1 300 000 per project. Participation by SMEs is growing strongly and the proportion of women involved is moving in the right direction at all levels of research. The socio-economic impact can be measured in terms of the knowledge built up and greater industrial competitiveness.

The year 2000 was also marked by the preparations for the Framework Programme for RTD for 2002 to 2006. One major milestone on the way to this new Framework Programme was the adoption, in October 2000, of the communication entitled *"Making a reality of the European Research Area: Guidelines for EU research activities (2002-2006)"*, which identified the new forms which the Community's activities to support research could take. The proposal is that the next Framework Programme should aim at contributing towards the creation of the European Research Area by bringing real European added value to the RTD undertaken at national and regional levels, based on three main principles: concentrating resources on a limited number of areas, applying new methods of intervention capable of exerting a more structuring effect on the RTD activities conducted in Europe, and simplifying and streamlining management procedures.

The decision-making process scheduled to complete adoption of the new Framework Programme before the ongoing programme comes to an end should clear two big hurdles in 2001 when the European Parliament gives its opinion on first reading and the Council of Ministers adopts its common position.

These discussions will draw on the parallel thinking and deliberations sparked by a succession of documents on numerous specific aspects of the strategy for creation of the European Research Area, such as the dialogue between science and society, infrastructure and human resources, and the international and regional dimensions. The recently established European Research Advisory Body (EURAB) will play a key role in this debate, by giving independent advice to back up the efforts to develop Europe's research policy consistently and efficiently.

# 1. A NEW RESEARCH AND TECHNOLOGICAL DEVELOPMENT (RTD) POLICY FOR THE EUROPEAN UNION: THE EUROPEAN RESEARCH AREA

In 1999, on the initiative of Mr Busquin, the Commission decided to give fresh impetus to the Community's research policy by putting it at the heart of sustainable development and of the welfare of citizens in the European Union both today and in the future.

To put into practice this new central priority for the Union, first the Commission had to assess fully what was at stake and the problems facing the Union before proposing a consistent package of solutions to make Europe's RTD policy more dynamic and put the Union back on the path of sustainable growth offering a wealth of high-quality jobs and capable of meeting the needs of society.

The plan to create a European Research Area is the Union's response to this challenge, and the proposal for the next Framework Programme for 2002-2006 is a key component of it.

## 1.1. General plan

### *1.1.1. The situation*

The European Union has many assets for producing high-quality research. In particular, it has a long tradition of scientific excellence, a solid fabric of public and private research centres plus a wide variety of schools and academic traditions and leads the world in many different fields.

However, Europe suffers from four major weaknesses. First, the share of gross domestic product (GDP) which Europe ploughs back into research and development is too low. In 1999[1] the European Union earmarked 1.92% of its GDP to RTD, compared with 2.64% in the USA and 3.04% in Japan. Second, Europe's industrial and economic performance fails to reflect its intense efforts in the field of science or the results which Europe has produced, as shown, *inter alia*, by the "2001 innovation scoreboard" published by the Commission in September 2001.[2] Third, research policies and activities in Europe are often compartmentalised at national level: 80% of the work is done within relatively self-contained national systems. Finally, Europe's universities and research centres are still less attractive than their counterparts in the USA.

### *1.1.2. The vision*

In response to this situation, on 18 January 2000 the Commission adopted a communication[3] unveiling a plan to create a European Research Area (ERA) offering a reference framework, in line with the principle of subsidiarity and seeking European added value, for closer coordination of research and innovation policies in Europe and more consistent implementation of regional, national and European research programmes, more efficient use of research facilities, greater mobility for European researchers and taking fuller account of relations between science and society. The ERA must result in a true open area for research allowing free movement of researchers and better use of scientific results within the Union.

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1 Eurostat and OECD.
2 SEC(2001) 1414.
3 COM(2000) 6, 18.1.2000.

The objectives of the ERA are reflected in the seven priorities for action:

– **Optimise the stock of material resources and facilities at European level** by mapping and networking scientific excellence in Europe, developing a European approach to research facilities, developing electronic networks and making better use of their potential for European researchers;

– **Make more coherent use of public instruments and resources** by decompartmentalisation and better coordination of national and European research programmes, and closer relations between European organisations for science and technology cooperation;

– **Make private investment more dynamic** by making more concerted use of instruments for providing indirect support to research, providing better protection for intellectual property, in particular by means of a Community patent, and exploring new avenues for encouraging company start-ups and risk capital investment;

– **Establish a common scientific and technical reference system** for policy implementation so that research activities take greater account of the needs of citizens and decision-makers;

– **Give rise to more abundant and more mobile human resources** by encouraging mobility from one country to another and between the academic world and industry throughout European researchers' careers, ensuring a bigger place and role for women in research and giving the young a taste for research and scientific careers;

– **Make the European landscape more dynamic, open and attractive to researchers and investment** by increasing the role of the regions in the European research effort, integrating the scientific communities of Western and Eastern Europe, and making Europe attractive to researchers from the rest of the world;

– **Create an area of shared values** by seeking common or converging responses to relations between science and society, which now often take on a European dimension, and encouraging greater coordination of the national means and methods for taking them into account.

*1.1.3. Broad public consultation*

First and foremost, the ERA is conceived as the fruit of discussions with all concerned. For this reason, at the same time as proposing the broad direction for implementing a true European Research Area, the communication of 18 January 2000 also opened a wide-ranging debate on the future of RTD in Europe.

These consultations were launched by disseminating the communication as widely as possible across the Union and putting it online on the Europa site. The Commission consulted more than 2000 research bodies and 700 enterprises. Individual researchers and citizens and all entities concerned had a chance to join in the debate in an electronic forum, alongside the official authorities and organisations representing the scientific community and industry.

On 3 May 2000 the Commission also organised a high-level seminar on the ERA in Brussels, attended by eminent representatives of the scientific community and industry from the EU, EEA and candidate countries. This produced a list of priorities for action.

In this way, the consultation process on the ERA enabled the Commission to expand on its analysis and identify in advance certain particularly sensitive issues.

### *1.1.4. Political support for the approach*

At the Lisbon European Council on 23 and 24 March 2000 the Heads of State and Government decided to place RTD and innovation policy at the heart of their strategy to turn the European Union, over the next decade, into "the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion."

Adding that "research activities at national and Union level must be better integrated and coordinated to make them as efficient and innovative as possible, and to ensure that Europe offers attractive prospects to its best brains", the Heads of State and Government identified the ERA as a key means of making Europe more competitive, in the context of the new "open method of coordination".

The European Parliament's resolution of 18 May 2000 together with the conclusions adopted by the Council in Luxembourg on 15 June 2000 and by the European Council in Santa Maria da Feira on 19 and 20 June 2000 and in Nice on 16 November 2000 all completely confirmed the strong support from the Union's decision-makers for the ERA.

## 1.2. A steady build-up

Throughout 2000 progress was made with building the ERA. Preparatory work started on most of the priorities for action and is still continuing. These tasks include coordinating national and European research policies, defining a European policy on research infrastructure, evaluating the level of mobility amongst researchers in Europe, and defining strategies to enhance the international and regional dimensions of the ERA.

### *1.2.1. Coordinating national and European policies*

Creation of a European Research Area depends, decisively, on greater consistency and coordination of research activities and policies at regional, national and European levels. The following preparatory work was carried out on this priority in 2000:

– **Establishment of a database on national activities**: One of the first measures taken by the Commission in 2000 was to consult the Member States in order to build up a preliminary database paving the way for specific action for networking research activities undertaken at national and regional levels, opening up the national programmes to each other, and improving collaboration with and between the other European bodies and frameworks for cooperation.

– **Benchmarking national research and innovation policies**: The Lisbon European Council asked the Member States and the Commission to develop "an open method of coordination" for benchmarking national research policies and a series of indicators. The work carried out by the Commission, in partnership with a High-Level Group set up for this purpose by Mr Busquin (cf. Section 3.4), was presented to the Council on 15 June and 16 November 2000. Four themes were selected for benchmarking: human resources, public and private investment in research and development, scientific and technological productivity, and the impact of research on

economic competitiveness and employment. A Commission staff working paper[4] gave a progress report on these themes plus details of the 20 indicators to be monitored and of the method for benchmarking research policies. Four expert groups have been given the task of analysing the data. Fifteen of the 20 indicators selected are completely available, while the other five have yet to be established, in collaboration with EUROSTAT. This first set of indicators has now been collected and was published in July 2001.[5] In its communication *"Innovation in a knowledge-driven economy"*[6] the Commission also included a draft version of the "innovation scoreboard", which was followed in September 2001 by the first edition of the scoreboard covering 17 indicators.[7] This highlighted the strengths and weaknesses in the innovation capacity of each Member State and of the European Union as a whole;

– **Mapping scientific excellence in Europe**: At the instigation of the Lisbon European Council and to follow up the Council meeting of 15 June 2000, the Commission and the Member States defined a common methodology for mapping scientific excellence in Europe. This method, based on indicators and peer review, will be applied initially to three priority areas of very different nature: nanotechnologies, life sciences and economic sciences.

### *1.2.2. Research infrastructure*

The conclusions of the Lisbon European Council asked the Member States and the Commission to ensure that the national and European support for research infrastructure is better integrated and coordinated and make it as efficient and innovative as possible, and that Europe's research and Europe's research infrastructure in particular offers attractive prospects to its best scientists. On 15 June and 14 December 2000 the Council in turn called for a new European approach to research infrastructure, including setting up a European electronic communications network.

In this context, the Commission joined forces with the French Ministry of Research and the European Science Foundation to organise a *Conference on Research Infrastructures* in Strasbourg from 18 to 20 September 2000 to seek new ways of ensuring coherent development of research infrastructure in Europe. This provided an opportunity for a wide-ranging exchange of views between representatives of the scientific and business communities in Europe and the authorities responsible for national science policies on the role of research infrastructure in science and innovation, the advantages of networking infrastructure, the mechanisms for operation of and access to infrastructure and the strengths and weaknesses in Europe today. A broad consensus emerged, between the institutions and scientists, in favour of a more coordinated approach in European policy in this field.

In its February 2001 working paper *"A European research area for infrastructures"*,[8] the Commission summed up the current thinking and proposed general lines of action for a European policy on research infrastructure including, in particular, that decisions to make optimum use of existing infrastructure and on the development of new key infrastructure should be based on a European decision-making mechanism backed up by independent scientific advice.

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4 SEC(2001) 1002, 20.6.2001.
5 Key figures 2001: http://europa.eu.int/comm/research/area/benchmarking2001.pdf.
6 COM(2000) 567, 20.9.2000.
7 SEC(2001) 1414.
8 SEC(2001) 356, 27.2.2001.

### *1.2.3. Human resources and mobility*

The Lisbon European Council also asked the Council and the Commission, together with the Member States where appropriate, to take the necessary steps to remove obstacles to the mobility of researchers in Europe by 2002 and to attract and retain high-quality research scientists. This objective, echoed in the Council resolution of 15 June 2000, prompted Mr Busquin to set up a High-Level Expert Group on Improving Mobility of Researchers (cf. Section 3.4.).

To follow up the work of this Group, at the behest of the Stockholm European Council held on 23 and 24 March 2001, the Commission adopted a communication on 20 June 2001 on *"A mobility strategy for the European Research Area"*[9] based on a package of measures to create a favourable environment in Europe to attract both European and non-European researchers and to provide greater encouragement for mobility between different countries and between business and academia throughout European researchers' careers and to explore the financial measures to be taken in order to attain a critical mass of mobile researchers within the ERA.

### *1.2.4. Science and society*

A qualitative analysis was started on public knowledge and perception of science.

In November 2000 the Commission submitted a working paper on "*Science, society and the citizen"*[10] to spark a debate at European level on relations between science and society in the European Research Area, particularly on structuring research policies around society's aims, risk management and the precautionary principle, ethics in science and research, the dialogue between researchers and citizens, public understanding of science, and the place and role of women in science and research.

Also, to prepare for establishment of the **common scientific and technical reference system**, the Joint Research Centre (JRC) set up a working party bringing together the heads of major national research laboratories to discuss in detail the operational functions to be defined for such a system. A parallel internal Commission task force compared different models for taking account of the needs of political decision-makers at each stage of implementation of public policy.

### *1.2.5. Making private investment more dynamic*

In July 2000 the Commission submitted a proposal for a regulation on the Community patent to protect intellectual property throughout the Union under more advantageous conditions, in terms of cost, legal certainty and procedures, than the existing European patents. Progress was made on a number of points, but the issues of jurisdiction for settling disputes and establishment of the infrastructure required remain open.

### *1.2.6. Establishment of EURAB*

In May 2000 Mr Busquin set up a working party to draft the mandate for an independent high-level advisory board on science, technology and innovation in Europe.

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[9] COM(2001) 331, 20.6.2001.
[10] SEC(2000) 1973, 14.11.2000.

This working party, chaired by Professor Helga Nowotny and consisting of 43 European experts from industry and the academic world, submitted its report in February 2001. Acting on its recommendations, on 27 June 2001 the Commission adopted a decision establishing the European Research Advisory Board (EURAB) to advise the Commission on Community research and innovation policy, particularly on creation of the ERA, implementation of the Framework Programme and on scientific and technological issues which could have implications for other Community policies.

### *1.2.7. International and regional dimensions of the ERA*

Turning to **international scientific and technological cooperation**, on 25 June 2001 the Commission adopted a communication on "*The international dimension of the European Research Area*"[11] proposing a strategy for greater consistency and coordination of national and Community cooperation activities and for concentrating the Union's efforts on selected areas, aims and non-EU partners. It must be implemented jointly by the Member States and the Community, taking account of the objectives of the Union's science and technology and external relations policies.

In its communication *"The regional dimension of the European Research Area"* adopted on 3 October 2001[12] the Commission analysed the role which regions can play in research and innovation in Europe and set out a three-part approach to consolidate the **regional dimension of the European Research Area**. The two existing instruments - the Innovation Action Plan for 2000-2006 to promote innovation to supplement the structural aid from the European Regional Development Fund (ERDF) plus the Framework Programme for 2002-2006 - are to be backed up by specific action to strengthen the scientific and technological base in the regions.

## 1.3. Preparation of the Framework Programme for 2002–2006

On 4 October 2000, on a proposal from Mr Busquin, the Commission adopted the communication "*Making a reality of the European Research Area: Guidelines for EU research activities (2002-2006)",*[13] which sets out the guiding principles for formulation and implementation of the next Framework Programme. In particular, it gives details of the objectives to be pursued, the dimensions to be taken into account and the instruments to be applied so that the Framework Programme can contribute fully to making a reality of the European Research Area. Furthermore it suggests a limited number of prioritary research themes that Community funding could concentrate on.

The Council and the European Parliament generally approved these guidelines. The November 2000 Council resolution particularly stressed the importance of the Framework Programme as a strategic tool for establishing the ERA, of the new "open method of coordination of national policies" and of the selective approach for setting priorities. The European Parliament's February 2001 report approved the concentration of efforts on a limited number of priority themes and the new instruments introduced to implement the Framework Programme, but expressed certain reservations at this stage about application of Article 169 of the EC Treaty.

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[11] COM(2001) 346, 25.6.2001.
[12] COM(2001) 549, 3.10.2001.
[13] COM(2000) 612, 4.10.2000.

### *1.3.1. A structuring approach*

The proposal for the Framework Programme of the European Community and of the European Atomic Energy Community for research activities for 2002-2006,[14] adopted by the Commission on 21 February 2001, aims at contributing towards the creation of the European Research Area by strengthening the scientific and technological bases of Community industry and helping to make it more competitive.

The three overriding principles applied for formulation of the programme were to concentrate on a selected number of priority research areas, to define new methods of intervention capable of exerting a structuring effect on the RTD activities conducted at Community and national level and to simplify and streamline management procedures.

The proposals for the specific programmes implementing the Framework Programme for 2002-2006[15] were adopted by the Commission on 30 May 2001 to provide fuller details, as early as possible, for the discussions underway within the institutions.

### *1.3.2. Three main blocks of activities with seven scientific and technological priorities*

The new Framework Programme proposed by the Commission is divided into three blocks of activities.

The first aims at **integrating European research** in seven thematic areas - following the consultation on the ERA and the orientations proposed in octobre 2000[16] - which require concentration of efforts in order to assemble the critical mass needed to make a real impact. These are all areas of major economic and social importance for the Union, where action by the Community can bring particular European added value: "genomics and biotechnology for health", "information society technologies", "nanotechnologies, intelligent materials and new production processes", "aeronautics and space", "food safety and health risks", "sustainable development and global change" and "citizens and governance in the European knowledge-based society".

An eighth priority is "anticipating the Union's scientific and technological needs" by adding a degree of flexibility to planning in order to decide and carry out action in support of other Community policies and to explore leading-edge fields of science and technology, which often overlap between several different disciplines and could be decisive for Europe's position in the forefront of knowledge and on emerging markets. These activities also include specific collective or cooperative research for SMEs and specific international cooperation activities to promote collaboration with Mediterranean third countries, Russia and the CIS, and developing countries.

The second block of activities aims at **structuring the European Research Area** by means of a series of measures on human resources and researcher mobility, research infrastructure, research and innovation, and relations between science and society.

Finally, the third block in the new Framework Programme aims at **strengthening the foundations of the European Research Area** with the aid of a series of generic measures to

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[14] COM(2001) 94, 21.2.2001.

[15] COM(2001) 279, 30.5.2001.

[16] An additionnal consultation was organized by the Commission in the framework of the network of national institutes for prospective lead by the IPTS (Institute for Prospective Technological Studies) from the JRC.

tighten up coordination of research and innovation activities and support coherent development of research and innovation policies in Europe.

The research and training activities proposed in the field of nuclear energy include further operation of the JET facilities, preparation of and participation in construction of the demonstration plant for controlled thermonuclear fusion ("Next Step" machine), waste treatment and storage, and activities on nuclear safety.

The Joint Research Centre (JRC) will be assigned the tasks of providing scientific support for Community policies, particularly on the environment and sustainable development, security and public safety, technology foresight and direct action to develop scientific and technical reference systems for the ERA. In the nuclear field, the research and training activities proposed for the JRC will focus primarily on waste management, control of nuclear materials, reactor safety, metrology for ionising radiation, and medical applications for nuclear research.

*1.3.3. Three new instruments to implement the Programme*

One of the features of the new Framework Programme are the three new instruments introduced to focus human and financial resources and assemble the critical mass required for the action to be taken in the priority thematic areas. These are "networks of excellence", "integrated projects" and participation by the Community in research and development programmes carried out jointly by several Member States, as provided for by Article 169 of the EC Treaty.

The objective of **networks of excellence** is to enhance the excellence and influence of European research through lasting integration of the research capacity available in given fields. They take a long-term view and are not out to produce precise, pre-defined results.

The objective of **integrated projects** is to concentrate ressources on problems considered important to Europe as a whole. Unlike "networks of excellence", "integrated projects" are directed towards precisely defined results which could lead to new products, processes or services in the short to medium term.

The networks of excellence and integrated projects will be implemented by means of simplified administrative procedures leaving a large degree of managerial autonomy and, in particular, allowing new partners to join as the need arises.

**Article 169 of the EC Treaty** allows the Community to participate in programmes carried out jointly by several Member States. This rule, never before used to implement the Framework Programme, should provide a means of focusing national research activities more closely on the interests of the Community in areas where certain Member States more directly concerned are prepared to pool their efforts. The Commission submitted conditions for application of Article 169 for discussion in its communication of 30 May 2001[17] in the general context of making the national and Community research programmes more complementary.

Another possibility opened up by the new Framework Programme is to use the Community funding in tandem with other sources of funding, such as the Structural Funds or the PHARE programme in the case of the candidate countries or in the form of joint action with the

[17] COM(2001) 282, 30.5.2001.

European Investment Bank (EIB[18]) and the European Investment Fund (EIF[19]). The joint memorandum signed on 7 June 2001[20] by the Commission and the EIB lays the foundation for cooperation between the Framework Programme and the "Innovation 2000 Initiative"[21] designed, in particular, to encourage research projects, support research infrastructure and raise venture capital for high-tech companies and incubators.

[18] http://www.eib.org.
[19] http://www.eif.org.
[20] C(2001) 1550; http://europa.eu.int/comm/research/press/2001/memorandum-eib-en.pdt.
[21] http://www.eib.org/pub/news/i2i/overview.htm.

## 2. IMPLEMENTATION AND IMPACT OF THE FRAMEWORK PROGRAMME IN 2000

In the course of the year 2000, a large number of projects under the 4th Framework Programme were completed or drawing to an end. Activities therefore centred primarily on implementing the 5th Framework Programme.

### 2.1. Implementation of the 5th Framework Programme

Around 4800 contracts were signed in 2000, with over 23 000 participants sharing financial support totalling around €3.9 billion from the Community. Statistical analysis of these contracts points to the general conclusion that in 2000 the 5th Framework Programme reached full speed, with the rates of participation and funding by type of action and programme in line with the forecasts and the number of cooperation links growing strongly.

The more detailed lessons to be learnt from this year are as follows:

– **Shared-cost action, particularly research and technological development projects, remains the predominant means of promoting scientific cooperation and knowledge generation in the Community**; in 2000 this type of action accounted for approximately 80% of the budget committed and for almost 70% of participations in the Framework Programme. Research and technological development projects received 94% of the funding and accounted for 90% of participations in shared-cost action. The rest was shared between demonstration projects, combined RTD/demonstration projects, support for access to research infrastructure and specific measures in favour of SMEs.

– **The average financial contribution per contract signed (shared-cost action) in 2000 was around €1.29 million**, slightly down on 1999 (€1.48 million), while the average number of participants per project rose from 5.4 in 1999 to almost 6.5. The net result is a slight reduction in the average financial contribution per participant.

– **The average project selection rate was over 28%, considerably higher than the 1999 figure of 22%**; however, this average masks big differences between the individual specific programmes, with selection rates ranging from 65% (EURATOM) to 19% (EESD).

– **The financial support from the Community was shared fairly equally between research centres, institutes of higher education and industry:** the same balance can be seen in the number of contracts signed with these three categories of participants in the Framework Programme.

– **Private and public bodies each take a comparable share of the financial support and number of contracts:** In 2000 the funding was shared almost equally between private bodies (€1 741 million or 45% of the total funding) and public bodies (€1 998 million or 51%). The numbers of participations by public bodies (12 268 or 53% of the total) and private bodies (9450 or 41% of the total) were also in the same order of magnitude. The rest of the funding was divided between international organisations, individuals and the Joint Research Centre.

– **Participation by Member States continues to predominate, but participation by the candidate countries is increasing:** 87% of the participants in the Framework

Programme are from the Union. Participation by the Associated States as a whole held steady at around 10% of the total, of which the share taken by the candidate countries rose from 39.5% to 46%. There is still room for improvement in the performance of these countries, by taking action on a combination of factors, such as availability of research infrastructure, development of the "culture" and practice of publishing invitations to submit proposals, better dissemination of information on such procedures and gradual integration into the academic and research networks in Europe on the themes covered by the Framework Programme.

– **The contracts signed in 2000 produced large numbers of cooperation links:** bodies from the Member States created more than 60 000 links with bodies from other Member States, over 6000 with bodies from the associated candidate countries, over 7000 with entities from the other Associated States and almost 3000 with bodies from other non-EU countries. At the same time, almost 900 cooperation links were established between bodies from the associated candidate countries.

– **Access to research infrastructure**: In 2000 a total of 126 new thematic networks bringing together 1438 partners received financial support totalling €84 million from the Community to open up access to public research infrastructure to European researchers on the same terms irrespective of their nationality, to offer opportunities for innovatory research on new instruments or to make better use of Europe's research infrastructure.

– **Support for training and mobility of researchers in Europe now occupies an important position in the Community's research efforts**: In 2000 a total of 167 research training networks for young researchers were opened up, bringing together 1339 teams which will work on joint projects in the years ahead. The Marie Curie scheme awarded 646 individual fellowships, 162 host fellowships in industry, 67 host fellowships in less developed regions and 213 grants to host pre-doctoral graduates at training sites, allowing the companies, training centres and regions concerned to start to recruit young researchers. Some 255 high-level scientific conferences providing an opportunity for established scientists and young European researchers to meet were also selected. In all, the financial support from the Community for training and mobility of researchers in Europe in 2000 totalled almost €392 million.

## 2.2. Impact of Community research

### *2.2.1. Socio-economic impact*

In 2000 the socio-economic impact of the Framework Programme in the Union was analysed in the five-year assessment reports on the Framework Programmes and on each specific programme and in the studies on the impact of the 4th Framework Programme at national level published by the Danish and Finnish authorities.

These analyses showed that the financial support from the Community had the twin effects of:

– improving the sharing ofknowledge and skills, establishing horizontal or vertical networks in the Union and in its partner countries in Europe and throughout the world and encouraging innovative schemes and action to improve the quality of research;

– Introducing new products and production processes, establishing closer links between industry, universities and research centres, and building more international teams.

Three methodological studies were started in 2000 to identify, collect and make more efficient use of result indicators in order to produce a more precise assessment of the impact of the Framework Programme on the legislative and regulatory environment in the Community and on Community policies on various subjects, particularly on competitiveness and sustainable growth, employment, health, training, the environment and research. Based on the results, monitoring of the socio-economic impact will continue and be stepped up in 2001.

On behalf of the Commission outside experts started assessments of the impact of the specific programmes in the fields of international cooperation, non-nuclear energy and competitive and sustainable growth.

### *2.2.2. SME access to research*

The "single entry point" for SMEs processed over 7 000 proposals in 2000. Via the information networks and help desks in the Member States and Associated States, it encourages and facilitates participation by SMEs in the Framework Programme. Its "national contact points" met four times in 2000 to coordinate their activities.

In all the research activities under the Framework Programme almost 4500 SMEs signed a contract in 2000. SMEs accounted for 22.5% of participations in the four thematic programmes and received 19% of the financial support allocated by these programmes.

In particular, proposals for specific measures for SMEs (exploratory awards and CRAFT cooperative research projects) increased strongly compared with the previous Framework Programme: almost 900 applications for exploratory awards and over 600 proposals for cooperative research projects were received in 2000. In the case of the CRAFT programme, this represented a tripling of proposals. Around 40% of these projects were selected. This will allow over 2000 SMEs to participate in an international research project, many of them for the first time. Almost 80% of them are small businesses with fewer than 50 employees. The awards proved particularly attractive for SMEs from Associated States, which made up 8% of the beneficiaries.

Future participation by SMEs in the Framework Programme will be stimulated by the spin-offs from the 53 contracts signed in 2000 on economic and technological intelligence activities which will help SMEs to identify economic and technological trends in various sectors and then prepare collaborative or cooperative research projects if necessary. They will also entail collaboration between different types of intermediaries working with SMEs (assistance networks, industrial federations, regional development agencies, etc.) which, in turn, will help to structure networks to assist SMEs in Europe.

### *2.2.3. Women in Community research*

Spurred on by a resolution adopted by the European Parliament in February 2000 which urged the Commission to continue and step up its action to strengthen the role and position of women in science, activities in 2000 included organising international meetings, setting up policy fora, establishing the *gender watch system* and launching studies to assess the impact of the gender dimension in the specific programmes.

The conference on "*Women and science: making change happen"* held in Brussels on 3 and 4 April 2000 brought together 450 participants who concluded that there was a need to adopt a scientific approach to gender equality in science.

In June and December 2000 the members of the "Helsinki group" of national civil servants responsible for monitoring the action on "women and science" took stock of the action taken to promote women in science in the Member States and in the countries associated with the 5th Framework Programme. In particular, they supplied the first statistics on the representation of women in scientific research and concluded that it was essential to mainstream the gender dimension in research policy.

The first gender impact studies were launched in June 2000 to evaluate the degree to which the various specific programmes take account of the gender dimension. The results were presented at the "*Gender and research"* conference on 8 and 9 November 2001.

The recommendations emerging from these various activities were taken up by the Commission in May 2001 in a working paper[22] which proposed a reinforced policy forum, an enriched gender watch system and complementary research to obtain a better understanding of the "gender and science" issue.

In 2000 women accounted for 30% of the members of the monitoring panels for the programmes, 27% in the external advisory groups, 21% on the programme committees, 23% of the evaluators for projects in the specific programmes and 26% of the members of the panels for the five-year assessments. These figures are moving towards the Commission's target of at least 40%. The proportion of women amongst the project coordinators for the Framework Programme in 1999 (latest data available) is estimated at 18% on average and at 25% for the IHP and INCO II programmes, although these estimates must still be refined. Just over 5% of the SMEs participating are managed by women, a figure comparable to the average for high-tech companies managed by women in the OECD countries.

### *2.2.4. Ethical aspects of Community research*

The recommendation by the European Group on Ethics in Science and New Technologies on the "ethical aspects of the 5th Framework Programme" laid the foundation for the reference framework which the Commission is piecing together to take account of the ethical aspects in Community research.

In 2000 the focus was principally on the "Quality of life and management of living resources" programme. The departments concerned asked researchers to consider the ethical dimension carefully when submitting proposals. Projects raising particular ethical issues were subjected to a specific ethical revue, after scientific evaluation of the project. This was the case in particular with research using tissues from embryos or foetuses, experiments on primates, clinical testing and genome research using human tissues or private data. Ethical evaluation groups consisting of 8 to 15 members from different disciplines (sociology, philosophy, law, medicine, biology, psychology etc.) analysed 100 or so proposals and gave opinions to keep the final projects in line with the ethical principles applying to human beings and animals.

Since January 2001 these assessments of the ethical aspects of research have been tightened up and extended to all the programmes: the ethical aspects are taken into consideration in the invitations to submit proposals and analysed when the proposals are evaluated. Projects in the

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[22] SEC(2001) 771, 15.5.2001.

programmes on "Quality of life and management of living resources", "Confirming the international role of Community research (INCO)" and "Improving human research potential" which raise particular ethical issues are subjected to a specific ethical revue.

*2.2.5. Impact on economic cohesion in Europe*

The activities in the "Innovation and SMEs" programme helped the Commission's regional policy departments to define regional strategies on innovation, technology transfer and networking of the regions concerned.

In 2000 the Framework Programme once again brought benefits to the "cohesion countries" (Greece, Spain, Ireland and Portugal). These countries accounted for 16.5% of participations by the Member States in contracts signed in 2000 (14.5% in 1999). In financial terms, the cohesion countries received 13.3% of the contributions from the Community. Lastly, almost 29% of the cooperation links established between bodies from the Member States included participants from the cohesion countries, thus adding to the volume of RTD to which they had access.

## 2.3. International cooperation

International cooperation on RTD takes two complementary forms in the 5th Framework Programme:

– activities to promote scientific and technological cooperation in the different programmes, including the regional and bilateral dialogues and, in particular, the S&T cooperation agreements;

– the specific action in the programme on "Confirming the international role of Community research (INCO)".

*2.3.1. Participation by the associated candidate countries*

The ten candidate countries from Central and Eastern Europe plus Cyprus are associated with the Framework Programme[23] and contribute to its budget in proportion to their GDP. The association negotiations with Malta were concluded in 2000 and the agreement was signed on 20 June 2001.

In 2000 around 1000 research centres in the associated candidate countries participated in the Framework Programme and 34 research centres of excellence were set up as a contribution to restructuring the science and technology sector in these countries (INCO programme).

A series of conferences opened in September 2000 to explore ways and means of improving scientific cooperation with the associated candidate countries and encourage them to participate in the European Research Area. In particular, the informal ministerial meeting chaired by Mr Busquin in Brussels on 12 July 2001 produced a fruitful exchange of views between the ministers responsible for research in the Member States and in the candidate countries on participation by the candidate countries in the European Research Area and in the 2002-2006 Framework Programme.

[23] Cyprus, Estonia, Lithuania and Poland are not associated with the EURATOM Framework Programme.

### *2.3.2. Other countries associated with the Framework Programme*

The three countries associated with the Framework Programme under the Treaty on the European Economic Area (Norway, Iceland and Liechtenstein) plus Israel registered some 700 participations in the Framework Programme in 2000. Switzerland had over 500 participations in the thematic programmes (project by project and covering costs).

### *2.3.3. Third countries*

Approximately 700 bodies from all other countries also participated.

Up until now relations with the non-candidate Central European countries have been limited to Albania, Bosnia and Herzegovina and the Former Yugoslav Republic of Macedonia (FYROM). By the end of 2000 the changing situation in this region had made it possible to propose specific action on "Balkan reintegration".

Countries from the former Soviet Union: the meetings on application of the partnership and cooperation agreements provided an opportunity to discuss the themes covered by the cooperation in the field of science and technology. An agreement on cooperation in science and technology was signed between the Union and Russia on 16 November 2000.

Emerging economies and industrialised countries: a joint declaration of intent was signed with the NSF (*National Science Foundation*) on research in the field of digital libraries under the agreement for scientific and technological cooperation with the USA. Negotiations are continuing on other measures to implement the agreement. Negotiations with a view to conclusion of an agreement on scientific and technological cooperation with Brazil started in December 2000. The 4th EU-Japan forum, held in Lisbon on 22 and 23 June 2000, brought further progress in relations between the Union and Japan in the field of science and technology, particularly life sciences, information technology, materials, the environment and measures to combat infectious diseases associated with poverty (malaria, tuberculosis and AIDS).

Mediterranean countries: the conclusions adopted by the European Council at Santa Maria da Feira were followed up by publication of a Commission staff paper on the synergies between MEDA and the 5th Framework Programme. In April 2000 the Monitoring Committee (MoCo) decided to set up two working parties, one on mobility amongst scientists, the other on technological innovation.

Developing countries: the Commission was involved in the reorganisation of agricultural research at world level (Dresden World Forum in May 2000), particularly in sub-Saharan Africa. The framework programme also generated initiatives on subjects of strategic importance to the developing countries, such as development of aquaculture (Nice 2000 Conference), measures to combat desertification and conservation of tropical forests. An initiative to step up research on three diseases associated with poverty (malaria, tuberculosis and AIDS) was launched in 2001.

### *2.3.4. Bilateral regional dialogues and international commitments*

In the context of its inter-regional relations, the Community continued its bilateral and regional dialogues on RTD with Asia (ASEM), Africa (Mediterranean partnership and follow-up to the Cairo Summit) and the Latin American and Caribbean countries (REALC). These dialogues focus on issues of regional importance and fit in with the EU's external relations

policy to forge closer partnerships with these regions in the context of the emerging knowledge-based society and support for regional integration.

## 2.4. Assessment of the Framework Programme

The year 2000 was marked by the five-year assessment of the European Union research programmes[24] by the high-level independent expert panels, as called for by the decisions adopting the programmes.

The five-year assessment of the Framework Programme prepared under the chairmanship of Mr Joan Majo stressed that the Framework Programme must be placed in the broader context of a genuine European Research Area formed in close partnership with the Member States and other Community policies, with enlargement in mind in particular. The accent must be placed on scientific and technological excellence, concentration of efforts, flexibility and efficiency, particularly by making better use of the panoply of instruments offered by the Treaty, and improving management structures and procedures. The Commission welcomed the panel's recommendations and took full account of them in its proposals for the new Framework Programme for 2002-2006.

The 2000 annual monitoring report on the Framework Programme stressed that improvements have been made in implementation of the 5th Framework Programme, notably in the form of introducing measures to promote development of the ERA, participation by SMEs, simplification of procedures and information for proposers and acting on the recommendations made by earlier monitoring panels. Nevertheless, it recommended reinforcing the structuring effect and international dimension of the Framework Programme in preparation for creation of the ERA and strengthening the management culture within the Commission, particularly by means of greater delegation of decision-making, appropriate training for research managers and closer coordination of certain programmes. It also stressed the need for further improvements in the information available to potential proposers and in the support for SMEs and to set objectives and a timetable for the procedures and to improve the Commission's in-house information system.

## 2.5. Mid-term review and adaptation of the 5th Framework Programme

The mid-term review[25] of the 5th Framework Programme carried out by the Commission as required by the decisions adopting the Framework Programmes reached conclusions similar to those of the five-year assessment panel and of the 2000 monitoring panel.

It concluded that adjustments needed to be made to the annual work programmes for the specific programmes, particularly so that they could contribute to creation of the European Research Area in the form of greater concentration of efforts and of launching pilot projects relevant to the measures envisaged in the next Framework Programme. These include encouraging medium- to large-scale targeted projects, greater support for research infrastructure, coordination with national activities (concerted action, expert groups, etc.) and establishing thematic networks on a number of subjects.

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[24] Five-year assessment of the European Union research and technological development programmes 1995-1999, Report of the independent expert panel and comments of the Commission on the expert panel's conclusions and recommendations (EUR 19426 and COM (2000)659 of 19 October 2000).

[25] SEC(2000) 1780, 23.10.2000.

Constructive discussions on these adjustments within the Programme Committees resulted in amendments to the work programmes and, in some cases, minor changes in the way the budget is allocated within the programme concerned.

### 2.6. Simplification of management

Simplification of administrative management of the Framework Programme entails continuous analysis, evaluation and improvement of procedures to make them more effective and efficient. To follow up the work by an in-house working party set up to this end, the Commission introduced or initiated numerous measures in the course of 2000 to simplify and improve administrative management of the 5th Framework Programme, with the help of the driving force provided by the broader context of the reform of the Commission.

Amongst other changes to the rules to speed up the evaluation and selection procedures and contract negotiations, the decision was taken to decentralise a number of in-house decisions to the departments responsible for day-to-day management. More generally, it was decided to develop training for managers of the research programme, particularly on financial matters, to lighten the workload on SMEs participating in the Framework Programme and to inform them, as fast as possible, of the outcome of the evaluation of their proposals.

The proposals on the Framework Programme for 2002-2006 fully reflect this desire for simplification, efficiency and closeness to the user, in particular through the implementation of new instruments with more flexible management arrangements.

## 3. CONSULTATION

Throughout the year the various advisory bodies which assist the Commission with exercising its tasks and implementing powers played their respective parts in management of the Framework Programme and in the preparatory work for the European Research Area.

### 3.1. Scientific and Technical Research Committee (CREST)

In 2000 CREST produced four reports on the coordination of RTD policies, new prospects for Europe's RTD system, new measures to implement European research, and transnational cooperation. These reports were drafted by the working parties set up in July 1999 to provide input for the discussions on the future of European research policy.

CREST is regularly consulted on new initiatives on RTD. It welcomed the two communications on the ERA and discussed them in depth. It also received regular progress reports on the 5th Framework Programme plus the final reports on certain ETAN/STRATA studies and on the first moves towards turning the ERA into reality, such as the action on "women and science" and the work of the high-level groups on coordination and benchmarking of research activities and on the mobility of researchers, which were set up to follow up the Lisbon European Council.

The national RTD policies in Spain, Portugal and France were also presented to the Committee.

### 3.2. External Advisory Groups

Throughout 2000 the External Advisory Groups (EAG) served as the link between the programmes, particularly the key actions, and the producers and users of research, in line with the mandate given in the 1998 decision setting them up.

The January 2000 communication on the ERA was submitted to and discussed within the EAGs, which generally reacted highly positively to it. The Groups were also very actively involved in changing the course of the key actions, including defining the revised work programmes and scheduling the invitations to submit proposals, and provided input for the discussions on the relations between research, the economy and society in their fields.

In February 2000 the Commission appointed new members to these Groups to take account, in particular, of the agreements associating the Central and Eastern European countries and Cyprus with the 5th Framework Programme. After the mandate of the members of these Groups expired at the end of 2000, these Groups were renewed on 21 March 2001 for the rest of the Framework Programme. Almost three-quarters of the outgoing members were reappointed for a second term.

On 10 October 2000 the Chairs and Vice-Chairs of the EAGs met Mr Busquin to report on the Groups' activities two years after they were set up. On this occasion they analysed the contribution which they had made to defining the content of the programmes and putting them into action, and the changes in progress as part of the new strategy on the ERA.

### 3.3. Programme Committees

The nine programme committees and the committee on the rules for participation and dissemination of results met more than 40 times in 2000. They were consulted approximately 100 times, at the behest of the Commission, principally on the draft decisions on the selection of proposals. All the opinions given were favourable. The Commission also consulted the committees informally on 300 or so occasions for exchanges of views or for information. In all, these consultations led to the adoption, by the Commission, of over 200 acts to implement the specific programmes.

In particular, the Commission consulted the committees concerning the update of the work programmes for the various specific programmes to bring them closer into line with the objectives and take account of the progress made on each programme and of the new reference framework created by the ERA. The programme committees expressed support for taking the first steps towards creation of the ERA in the course of the 5th Framework Programme.

### 3.4. High-Level Groups

To follow up the Council resolution of 15 June 2000 on the *Future of European research* and in the spirit of closer partnership between the Commission and the Member States, Mr Busquin set up two "High-Level Groups" made up of representatives of the Member States appointed by the Research Ministers.

The first, on **benchmarking national research policies**, mapping scientific excellence and networking national research programmes, started work in September 2000. On benchmarking, Commission staff and the Group devised a methodology based on an approach which was partly quantitative, with 20 indicators, and partly qualitative, with the aid of outside experts. This methodology centres on the four themes referred to in the

abovementioned Council resolution. As for the mapping exercise, the Commission and the Group decided the objectives, methodology and an initial selection of fields. With regard to networking national programmes, the Group supplied preliminary information on the ways and extent to which these are open to pave the way for the more detailed discussions to follow in the months ahead.

The second Group was given the task of **evaluating the level of mobility amongst researchers in Europe** and of identifying obstacles to mobility and ways round them. This Group met several times in 2000 and 2001 to examine the replies to a questionnaire completed by the Member States and to prepare a report on improving mobility amongst researchers. This report was finalised in April 2001 and served as the basis for the communication on *"A mobility strategy for the European Research Area"*, which was adopted by the Commission on 20 June 2001.[26]

## 4. OUTLOOK

The debate on the future of RTD in Europe sparked by the communication on the European Research Area at the start of 2000 will address this matter in greater depth in the period ahead. It will draw on the thinking generated by a series of policy documents - some adopted already, others to follow - defining themes and proposing objectives and means for future action by the Union in the research field.

The period ahead will also see completion of the decision-making process for adoption of the legal framework for Community research in the period 2002-2006. The proposals for decisions on the Framework Programme and the specific programmes already before the European Parliament and the Council of Ministers have been joined by proposals on the rules for participation and dissemination of results.

Meanwhile work will continue with a view to adoption of the regulation on the Community patent. Also, the European Research Advisory Body (EURAB) established on 27 June 2001 will start work in the autumn.

Finally, implementation of the 5th Framework Programme will continue, notably with the publication of numerous invitations to submit proposals in the course of 2001 to complete coverage of the research topics and meet the objectives set by the specific programmes and defined more closely in the corresponding work programmes.

### 4.1 Making a reality of the ERA

The topics which will be discussed in greater depth cover every dimension of research policy and of its relations with society, particularly creating closer links between science, society and citizens, taking account of the regional and international dimensions in the Union's research policy, devising a strategy to improve mobility amongst researchers, formulating a European policy on research infrastructure, mainstreaming gender in research policy, mapping excellence and benchmarking national research policies and innovation in Europe.

These deliberations have reached various stages and, where appropriate, progress reports will provide input for the political debate now in progress. A report on benchmarking research policies in Europe has been submitted to the Council already, at its meeting on 26 June 2001.

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[26] COM (2001) 331, 20.6.2001.

Europe's first "innovation scoreboard" was published in September 2001. A Commission working paper on mapping excellence is expected towards the end of 2001.

### 4.2 Decision-making process for adoption of the legal framework

The preparatory work for the Framework Programme for 2002-2006 culminated in formal adoption of the proposal on 21 February 2001. The Research Ministers held a preliminary exchange of views on the proposal at their informal meeting in Uppsala on 3 March, followed by a policy debate at the Council meeting on research on 26 June 2001. The European Parliament is expected to give its opinion in the final quarter of 2001. This should enable the Council of Ministers to adopt its "common position" by the end of the year. This schedule for the first reading fits in with the timetable set by the European Council aiming at adoption in mid-2002 so that a start can be made with implementing the programme at the beginning of 2003 at the latest.

The proposals for decisions on the five specific programmes and the communication on application of Article 169 were adopted on 30 May 2001 and will be examined in detail by the European Parliament and the Council once the first reading of the Framework Programme has been completed. As the Commission announced when it adopted the proposal on the specific programme on "Integrating and strengthening the European Research Area", in the autumn the Commission will propose a revised text giving details of the content of the chapter on "Anticipating the EU's scientific and technological needs" and of the procedures for implementing it, particularly the work to be done during the first year of the programme.

The proposals on the rules for participation and for dissemination of results adopted by the Commission on 10 September will also be examined in the period ahead, thus completing the legal instruments for the new Framework Programme.

**ANNEX I: Statistical and financial data**

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**NOTES**

– All the countries in the "Candidate and associated countries" group are both candidates and associated, with the exception of Turkey, which is a candidate country but is not associated with the Framework Programme.

– It is not possible to calculate States' "success rates" from the number of proposals received, selected and funded since a proposal selected in year *n* might have been received in year *n-1* or might not receive funding until year *n+1*.

– The figures on fellowship contracts show the number of proposals received, selected and funded. Depending on the type of grant, a single proposal could allow funding of one or more fellows. The number of fellows cannot be seen from the number of participants in the contract.

– The representation of a given State is the number of proposals received in which at least one body from that State is participating. By contrast, participation by a given State in the contracts signed is the total number of bodies from that State involved in the contracts. Participation is therefore higher than representation.

– A cooperation link is considered to have been established between two bodies if they are participating in the same project. This cooperation link is counted once if the two bodies are from the same country (diagonally on the cooperation links matrix) and twice if the bodies are from different countries - once as a link from country A to country B and once as a link from country B to country A. The net number of cooperation links is, therefore, the sum of the number of links between bodies from the same country plus half the number of links between bodies from different countries.

**TABLE 1A: FP5 OVERVIEW: PROPOSALS RECEIVED IN 2000**

| | **PROPOSALS RECEIVED IN 2000** | | | | |
|---|---|---|---|---|---|
| | A | B | C=B/A | D | E=D/A |
| | Number of proposals | Number of participations | Average number of participations per proposal | Requested financial contribution (€ million) | Average requested financial contribution per proposal (€ million) |
| Shared-cost actions | 9.514 | 67.419 | 7,09 | 14.621,43 | 1,54 |
| *- of which R&D projects* | *7.333* | *55.793* | *7,61* | *12.861,95* | *1,75* |
| *- of which demonstration projects* | *170* | *1.100* | *6,47* | *325,25* | *1,91* |
| *- of which combined projects* | *450* | *4.116* | *9,15* | *893,50* | *1,99* |
| *- of which support to infrastructures* | *0* | - | - | - | - |
| *- of which cooperative research* | *667* | *4.476* | *6,71* | *524,22* | *0,79* |
| *- of which exploratory awards* | *894* | *1.934* | *2,16* | *16,51* | *0,02* |
| Fellowships | 2.559 | 4.605 | 1,80 | 345,03 | 0,13 |
| Support to networks | 506 | 6.957 | 13,75 | 522,12 | 1,03 |
| Concerted actions | 180 | 2.269 | 12,61 | 136,74 | 0,76 |
| Accompanying measures | 2649 | 10.316 | 3,89 | 1.240,92 | 0,47 |
| **Total** | **15.408** | **91.566** | **5,94** | **16.866,24** | **1,09** |

**TABLE 1B: FP5 OVERVIEW: PROPOSALS SELECTED FOR FUNDING IN 2000**

| | PROPOSALS SELECTED FOR FUNDING IN 2000 | | | | |
|---|---|---|---|---|---|
| | A | B | C=B/A | D | E=D/A |
| | Number of proposals | Number of participations | Average number of participations per proposal | Requested financial contribution (€ million) | Average requested financial contribution per proposal (€ million) |
| Shared-cost actions | 2.250 | 15.777 | 7,01 | 3.330,97 | 1,48 |
| *- of which R&D projects* | *1.483* | *12.006* | *8,10* | *2.841,45* | *1,92* |
| *- of which demonstration projects* | *36* | *254* | *7,06* | *85,67* | *2,38* |
| *- of which combined projects* | *75* | *886* | *11,81* | *212,66* | *2,84* |
| *- of which support to infrastructures* | *0* | *0* | - | *0* | - |
| *- of which cooperative research* | *251* | *1.751* | *6,98* | *183,73* | *0,73* |
| *- of which exploratory awards* | *405* | *880* | *2,17* | *7,46* | *0,02* |
| Fellowships | 794 | 1.269 | 1,60 | 135,64 | 0,17 |
| Support to networks | 305 | 3822 | 12,53 | 356,69 | 1,17 |
| Concerted actions | 62 | 881 | 14,21 | 51,30 | 0,83 |
| Accompanying measures | 1.002 | 3.526 | 3,52 | 418,81 | 0,42 |
| **Total** | **4.413** | **25.275** | **5,73** | **4.293,41** | **0,97** |

**TABLE 1C: FP5 OVERVIEW: CONTRACTS SIGNED IN 2000**

| | CONTRACTS SIGNED IN 2000 | | | | |
|---|---|---|---|---|---|
| | A | B | C=B/A | D | E=D/A |
| | Number of contracts signed | Number of participations | Average number of participations per contract | Requested financial contribution (€ million) | Average requested financial contribution per proposal (€ million) |
| Shared-cost actions | 2.426 | 15.679 | 6,46 | 3122,56 | 1,29 |
| *- of which R&D projects* | *1.948* | *14.343* | *7,36* | *3.002,26* | *1,54* |
| *- of which demonstration projects* | *10* | *97* | *9,70* | *15,61* | *1,56* |
| *- of which combined projects* | *18* | *154* | *8,56* | *24,70* | *1,37* |
| *- of which support to infrastructures* | *66* | *66* | *1,00* | *50,98* | *0,77* |
| *- of which cooperative research* | *44* | *332* | *7,55* | *21,47* | *0,49* |
| *- of which exploratory awards* | *340* | *687* | *2,02* | *7,54* | *0,02* |
| Fellowships | 1.113 | 1.660 | 1,49 | 173,47 | 0,16 |
| Support to networks | 293 | 2.777 | 9,48 | 302,88 | 1,03 |
| Concerted actions | 61 | 403 | 6,61 | 27,65 | 0,45 |
| Accompanying measures | 925 | 2.501 | 2,70 | 257,76 | 0,28 |
| **Total** | **4.818** | **23.020** | **4,78** | **3.884,32** | **0,81** |

## TABLE 2A: CONTRACTS SIGNED BY TYPE OF ACTION (IN € MILLION)

| | ALL FP5 CONTRACTS SIGNED IN 2000 | | | | | SHARED-COST ACTIONS | | FELLOWSHIPS | | SUPPORT TO NETWORKS | | CONCERTED ACTIONS | | ACCOMPANYING MEASURES | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | B | C=B/A | D | E=D/A | F | G | H | I | J | K | L | M | N | O |
| | Number of contracts signed | Number of partici-pations | Average number of partici-pations per contract | Commu-nity financial contribu-tion (€ million) | Average financial contribution per contract (€ million) | Number of contracts signed | Community financial contrib. (€ million) | Number of contracts signed | Community financial contrib. (€ million) | Number of contracts signed | Commu-nity financial contrib. (€ million) | Number of contracts signed | Commu-nity financial contrib. (€ million) | Number of contracts signed | Commu-nity financial contrib. (€ million) |
| **QUALITY OF LIFE** | **927** | **4517** | **4,87** | **875,83** | **944,81** | **634** | **808,83** | **194** | **33,49** | **17** | **11,30** | **37** | **19,77** | **45** | **2,45** |
| Food, nutrition and health | 138 | 644 | 4,67 | 111,25 | 0,81 | 98 | 98,01 | 25 | 4,32 | 3 | 2,77 | 6 | 5,74 | 6 | 0,40 |
| Control of infectious diseases | 102 | 548 | 5,37 | 118,34 | 1,16 | 70 | 108,63 | 22 | 4,39 | 1 | 0,70 | 8 | 4,57 | 1 | 0,04 |
| The "cell factory" | 148 | 712 | 4,81 | 152,63 | 1,03 | 101 | 144,79 | 38 | 5,38 | 2 | 2,21 | | 0,00 | 7 | 0,25 |
| Environment and health | 63 | 309 | 4,90 | 59,39 | 0,94 | 44 | 56,22 | 14 | 2,37 | 0 | 0,00 | 3 | 0,37 | 2 | 0,40 |
| Sustainable agriculture, fisheries and forestry | 226 | 1.037 | 4,59 | 170,35 | 0,75 | 159 | 159,32 | 43 | 6,81 | 0 | 0,00 | 7 | 3,28 | 17 | 0,94 |
| The ageing population and disabilities | 60 | 280 | 4,67 | 58,34 | 0,97 | 42 | 54,77 | 14 | 2,72 | 1 | 0,39 | 1 | 0,42 | 2 | 0,04 |
| RTD activities of a generic nature | 170 | 898 | 5,28 | 191,83 | 1,13 | 114 | 178,39 | 32 | 6,51 | 4 | 2,65 | 10 | 3,90 | 10 | 0,38 |
| Support to infrastructures | 20 | 89 | 4,45 | 13,70 | 0,69 | 6 | 8,69 | 6 | 0,96 | 6 | 2,57 | 2 | 1,48 | 0 | 0,00 |
| **INFORMATION SOCIETY** | **622** | **4051** | **6,51** | **838,97** | **1,35** | **385** | **686,58** | **15** | **3,00** | **27** | **24,89** | **2** | **0,80** | **193** | **123,70** |
| Systems and services for the citizen | 104 | 729 | 7,01 | 131,90 | 1,27 | 82 | 117,93 | 0 | 0,00 | 2 | 1,68 | 0 | 0,00 | 20 | 12,28 |
| New methods of work and electronic commerce | 131 | 878 | 6,70 | 124,34 | 0,95 | 61 | 77,77 | 0 | 0,00 | 5 | 5,12 | 2 | 0,80 | 63 | 40,65 |
| Multimedia content and tools | 76 | 547 | 7,20 | 101,64 | 1,34 | 58 | 91,05 | 0 | 0,00 | 1 | 0,55 | 0 | 0,00 | 17 | 10,04 |
| Essential technologies and infrastructures | 148 | 838 | 5,66 | 210,19 | 1,42 | 82 | 173,72 | 0 | 0,00 | 5 | 3,72 | 0 | 0,00 | 61 | 32,75 |
| Cross-programme themes | 47 | 379 | 8,06 | 74,08 | 1,58 | 38 | 61,24 | 0 | 0,00 | 2 | 1,57 | 0 | 0,00 | 7 | 11,26 |
| RTD activities of a generic nature | 50 | 284 | 5,68 | 61,70 | 1,23 | 43 | 58,51 | 0 | 0,00 | 3 | 2,80 | 0 | 0,00 | 4 | 0,40 |
| Support to infrastructures | 66 | 396 | 6,00 | 135,13 | 2,05 | 21 | 106,35 | 15 | 3,00 | 9 | 9,46 | 0 | 0,00 | 21 | 16,32 |
| **SUSTAINABLE GROWTH** | **542** | **4054** | **7,48** | **821,73** | **1,52** | **499** | **790,08** | | 0,00 | **13** | **15,75** | 0 | 0,00 | **30** | **15,91** |
| Innovative products, processes and organisation | 185 | 1.095 | 5,92 | 177,34 | 0,96 | 176 | 173,91 | 0 | 0,00 | 2 | 2,73 | 0 | 0,00 | 7 | 0,70 |
| Sustainable mobility and intermodality | 32 | 393 | 12,28 | 64,79 | 2,02 | 17 | 40,50 | 0 | 0,00 | 8 | 11,00 | 0 | 0,00 | 7 | 13,28 |
| Land transport and marine technologies | 82 | 647 | 7,89 | 119,92 | 1,46 | 81 | 119,79 | 0 | 0,00 | 0 | 0,00 | 0 | 0,00 | 1 | 0,12 |
| New perspectives for aeronautics | 62 | 750 | 12,10 | 259,67 | 4,19 | 56 | 258,20 | 0 | 0,00 | 0 | 0,00 | 0 | 0,00 | 6 | 1,46 |
| RTD activities of a generic nature | 179 | 1.149 | 6,42 | 198,79 | 1,11 | 169 | 197,66 | 0 | 0,00 | 1 | 0,78 | 0 | 0,00 | 9 | 0,34 |
| Support to infrastructures | 2 | 20 | 10,00 | 1,24 | 0,62 | 0 | 0,00 | 0 | 0,00 | 2 | 1,24 | 0 | 0,00 | 0 | 0,00 |

| | ALL FP5 CONTRACTS SIGNED IN 2000 | | | | | SHARED-COST ACTIONS | | FELLOWSHIPS | | SUPPORT TO NETWORKS | | CONCERTED ACTIONS | | ACCOMPANYING MEASURES | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | B | C=B/A | D | E=D/A | F | G | H | I | J | K | L | M | N | O |
| | Number of contracts signed | Number of partici-pations | Average number of partici-pations per contract | Community financial contribution (€ million) | Average financial contribution per contract (€ million) | Number of contracts signed | Community financial contrib. (€ million) | Number of contracts signed | Commu-nity financial contrib. (€ million) | Number of contracts signed | Commu-nity financial contrib. (€ million) | Number of contracts signed | Commu-nity financial contrib. (€ million) | Number of contracts signed | Commu-nity financial contrib. (€ million) |
| **ENERGY & ENVIRONMENT** | **443** | **3237** | **7,31** | **447,44** | **1,01** | **399** | **434,00** | **14** | **2,08** | **9** | **8,03** | **6** | **2,17** | **15** | **1,15** |
| ***ENVIRONMENT*** | ***251*** | ***2048*** | ***8,16*** | ***277,92*** | ***1, 11*** | ***235*** | ***269,99*** | ***0*** | ***0,00*** | ***5*** | ***5,87*** | ***5*** | ***1,91*** | ***6*** | ***0,15*** |
| Sustainable management and quality of water | 67 | 447 | 6,67 | 75,41 | 1,13 | 64 | 74,60 | 0 | 0,00 | 1 | 0,77 | | 0,00 | 2 | 0,04 |
| Global change, climate and biodiversity | 87 | 768 | 8,83 | 98,87 | 1,14 | 79 | 97,26 | 0 | 0,00 | 1 | 0,47 | 3 | 1,03 | 4 | 0,11 |
| Sustainable marine ecosystems | 32 | 235 | 7,34 | 40,21 | 1,26 | 32 | 40,21 | 0 | 0,00 | 0 | 0,00 | 0 | 0,00 | 0 | 0,00 |
| The city of tomorrow and cultural heritage | 32 | 299 | 9,34 | 32,41 | 1,01 | 29 | 30,49 | 0 | 0,00 | 2 | 1,67 | 1 | 0,25 | 0 | 0,00 |
| RTD activities of a generic nature | 23 | 172 | 7,48 | 18,19 | 0,79 | 23 | 18,19 | 0 | 0,00 | | 0,00 | 0 | 0,00 | 0 | 0,00 |
| Support for research infrastructures | 10 | 127 | 12,70 | 12,83 | 1,28 | 8 | 9,24 | 0 | 0,00 | 1 | 2,96 | 1 | 0,63 | 0 | 0,00 |
| ***ENERGY*** | ***192*** | ***1189*** | ***6,19*** | ***169,52*** | ***0,88*** | ***164*** | ***164,01*** | ***14*** | ***2,08*** | ***4*** | ***2,16*** | ***1*** | ***0,26*** | ***9*** | ***1,00*** |
| Cleaner energy systems, incl. renewables | 80 | 458 | 5,73 | 70,12 | 0,88 | 68 | 68,12 | 6 | 0,70 | 1 | 0,59 | 0 | 0 | 5 | 0,70 |
| Economic and efficient energy | 105 | 657 | 6,26 | 96,46 | 0,92 | 90 | 93,16 | 8 | 1,37 | 2 | 1,37 | 1 | 0,26 | 4 | 0,30 |
| RTD activities of a generic nature | 7 | 74 | 10,57 | 2,94 | 0,42 | 6 | 2,73 | 0 | 0,00 | 1 | 0,20 | 0 | 0,00 | 0 | 0 |
| **NUCLEAR ENERGY** | **307** | **1316** | **4,29** | **232,59** | **0,76** | **259** | **224,20** | **10** | **1,01** | **17** | **4,98** | **9** | **1,80** | **12** | **0,59** |
| Controlled thermonuclear fusion | 168 | 232 | 1,38 | 138,58 | 0,01 | 166 | 138,33 | 2 | 0,24 | 0 | 0,00 | 0 | 0,00 | 0 | |
| Nuclear fission | 93 | 735 | 7,90 | 66,69 | 0,08 | 68 | 61,62 | 6 | 0,57 | 9 | 3,19 | 4 | 1,06 | 6 | 0,25 |
| RTD activities of a generic nature | 37 | 244 | 6,59 | 25,37 | 0,18 | 25 | 24,25 | 2 | 0,20 | 1 | 0,20 | 3 | 0,39 | 6 | 0,33 |
| Support for infrastructure | 9 | 105 | 11,67 | 1,95 | 1,30 | 0 | | 0 | 0,00 | 7 | 1,60 | 2 | 0,35 | 0 | 0,00 |
| **INTERNATIONAL ROLE** | **236** | **960** | **4,07** | **105,46** | **0,45** | **106** | **74,11** | **25** | **2,21** | **1** | **0,36** | 7 | **3,12** | **97** | **25,66** |
| Countries in the pre-accession phase | 41 | 49 | 1,20 | 20,05 | 0,49 | 0 | 0,00 | 0 | 0,00 | 0 | 0,00 | 0 | 0,00 | 41 | 20,05 |
| NIS and CEEC not in the pre-accession phase | 64 | 363 | 5,67 | 29,79 | 0,47 | 50 | 27,64 | 0 | 0,00 | 0 | 0,00 | 0 | 0,00 | 14 | 2,14 |
| Mediterranean partner countries | 28 | 130 | 4,64 | 12,82 | 0,46 | 15 | 11,25 | 0 | 0,00 | 0 | 0,00 | 2 | 0,99 | 11 | 0,57 |
| Developing countries | 73 | 354 | 4,85 | 39,68 | 0,54 | 41 | 35,21 | 0 | 0,00 | 1 | 0,36 | 5 | 2,12 | 26 | 1,98 |
| Emerging economies and industrialised countries | 3 | 4 | 1,33 | 0,42 | 0,14 | 0 | 0,00 | 0 | 0,00 | 0 | 0,00 | 0 | 0 | 3 | 0,42 |
| Fellowships for developing countries | 8 | 24 | 3,00 | 0,17 | 0,02 | 0 | 0,00 | 8 | 0,17 | 0 | 0,00 | 0 | 0,00 | 0 | 0,00 |
| Fellowships for Community researchers | 17 | 34 | 2,00 | 2,04 | 0,12 | 0 | 0,00 | 17 | 2,04 | 0 | 0,00 | 0 | 0,00 | 0 | 0,00 |
| Coordination | 2 | 2 | 1,00 | 0,49 | 0,25 | 0 | 0,00 | 0 | 0,00 | 0 | 0,00 | 0 | 0,00 | 2 | 0,49 |

| | ALL FP5 CONTRACTS SIGNED IN 2000 | | | | | SHARED-COST ACTIONS | | FELLOWSHIPS | | SUPPORT TO NETWORKS | | CONCERTED ACTIONS | | ACCOMPANYING MEASURES | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | B | C=B/A | D | E=D/A | F | G | H | I | J | K | L | M | N | O |
| | Number of contracts signed | Number of partici-pations | Average number of partici-pations per contract | Community financial contribution (€ million) | Average financial contribution per contract (€ million) | Number of contracts signed | Community financial contrib. (€ million) | Number of contracts signed | Commu-nity financial contrib. (€ million) | Number of contracts signed | Commu-nity financial contrib. (€ million) | Number of contracts signed | Commu-nity financial contrib. (€ million) | Number of contracts signed | Commu-nity financial contrib. (€ million) |
| **INNOVATION – SMEs** | **171** | **994** | **5,81** | **94,55** | 0,55 | **39** | **21,97** | 0 | 0,00 | **4** | **2,94** | 0 | 0,00 | **128** | **69,64** |
| Promotion of innovation | 21 | 144 | 6,86 | 16,91 | 0,81 | 15 | 12,59 | 0 | 0,00 | 0 | 0,00 | 0 | 0,00 | 6 | 4,32 |
| Joint innovation/SME activities | 97 | 362 | 3,73 | 48,56 | 0,50 | 24 | 9,38 | 0 | 0,00 | 4 | 2,94 | 0 | 0,00 | 69 | 36,24 |
| Economic and technological intelligence | 53 | 488 | 9,21 | 29,08 | 0,55 | 0 | 0,00 | 0 | 0,00 | 0 | 0,00 | 0 | 0,00 | 53 | 29,08 |
| **HUMAN POTENTIAL** | **1570** | **3891** | **2,48** | **467,73** | **0,30** | **105** | **82,78** | **855** | **131,68** | **205** | **234,62** | 0 | 0,00 | **405** | **18,66** |
| Research training networks | 167 | 1.339 | 8,02 | 218,66 | 1,31 | 0 | 0,00 | 0 | 0,00 | 167 | 218,66 | 0 | 0,00 | 0 | 0,00 |
| Marie-Curie fellowship | 855 | 1.368 | 1,60 | 131,68 | 0,15 | 0 | 0,00 | 855 | 131,68 | 0 | 0,00 | 0 | 0,00 | 0 | 0,00 |
| Access to research infrastructures | 87 | 313 | 3,60 | 62,24 | 0,72 | 68 | 53,23 | 0 | 0,00 | 19 | 9,01 | 0 | 0,00 | 0 | 0,00 |
| Socio-economic research | 43 | 303 | 7,05 | 31,54 | 0,73 | 37 | 29,55 | 0 | 0,00 | 6 | 1,99 | 0 | 0,00 | 0 | 0,00 |
| Public perception | 14 | 82 | 5,86 | 3,40 | 0,24 | 0 | 0,00 | 0 | 0,00 | 8 | 2,40 | 0 | 0,00 | 6 | 1,00 |
| Support for S&T policies | 8 | 90 | 11,25 | 3,38 | 0,42 | 0 | 0,00 | 0 | 0,00 | 5 | 2,54 | 0 | 0,00 | 3 | 0,83 |
| Promoting S&T excellence | 396 | 396 | 1,00 | 16,82 | 0,04 | 0 | 0,00 | 0 | 0,00 | 0 | 0,00 | 0 | 0,00 | 396 | 16,82 |
| **TOTAL FP5 IN 2000** | **4.818** | **23.020** | **4,78** | **3884,32** | **0,81** | **2.426** | **3122,56** | **1113** | **173,47** | **293** | **302,88** | **61** | **27,66** | **925** | **257,76** |

## TABLE 2B: CONTRACTS SIGNED BY TYPE OF ACTION (IN %)

| | ALL FP5 CONTRACTS SIGNED IN 2000 | | | | | SHARED-COST ACTIONS | | FELLOWSHIPS | | SUPPORT TO NETWORKS | | CONCERTED ACTIONS | | ACCOMPANYING MEASURES | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | B | C=B/A | D | E=D/A | F | G | H | I | J | K | L | M | N | O |
| | Number of contracts signed | Number of partici-pations | Average number of partici-pations per contract | Commu-nity financial contribu-tion (€ million) | Average financial contributi on per contract (€ million) | Number of contracts signed | Commu-nity financial contrib. (%) | Number of contracts signed | Commu-nity financial contrib. (%) | Number of contracts signed | Commu-nity financial contrib. (%) | Number of contracts signed | Commu-nity financial contrib. (%) | Number of contracts signed | Commu-nity financial contrib. (%) |
| **QUALITY OF LIFE** | **927** | **4517** | **4,87** | **875,83** | **944,81** | **68,39 %** | **92,35 %** | **20,93 %** | **3,82 %** | **1,83 %** | **1,29 %** | **3,99 %** | **2,26 %** | **4,85 %** | **0,28 %** |
| Food, nutrition and health | 138 | 644 | 4,67 | 111,25 | 0,81 | 71,01 % | 88,10 % | 18,12 % | 3,88 % | 2,17 % | 2,49 % | 4,35 % | 5,16 % | 4,35 % | 0,36 % |
| Control of infectious diseases | 102 | 548 | 5,37 | 118,34 | 1,16 | 68,63 % | 91,79 % | 21,57 % | 3,71 % | 0,98 % | 0,59 % | 7,84 % | 3,86 % | 0,98 % | 0,03 % |
| The "cell factory" | 148 | 712 | 4,81 | 152,63 | 1,03 | 68,24 % | 94,86 % | 25,68 % | 3,52 % | 1,35 % | 1,45 % | 0,00 % | 0,00 % | 4,73 % | 0,16 % |
| Environment and health | 63 | 309 | 4,90 | 59,39 | 0,94 | 69,84 % | 94,66 % | 22,22 % | 3,99 % | 0,00 % | 0,00 % | 4,76 % | 0,62 % | 3,17 % | 0,67 % |
| Sustainable agriculture, fisheries and forestry | 226 | 1.037 | 4,59 | 170,35 | 0,75 | 70,35 % | 93,53 % | 19,03 % | 4,00 % | 0,00 % | 0,00 % | 3,10 % | 1,93 % | 7,52 % | 0,55 % |
| The ageing population and disabilities | 60 | 280 | 4,67 | 58,34 | 0,97 | 70,00 % | 93,88 % | 23,33 % | 4,66 % | 1,67 % | 0,67 % | 1,67 % | 0,72 % | 3,33 % | 0,07 % |
| RTD activities of a generic nature | 170 | 898 | 5,28 | 191,83 | 1,13 | 67,06 % | 92,99 % | 18,82 % | 3,39 % | 2,35 % | 1,38 % | 5,88 % | 2,03 % | 5,88 % | 0,20 % |
| Support to infrastructures | 20 | 89 | 4,45 | 13,70 | 0,69 | 30,00 % | 63,43 % | 30,00 % | 7,01 % | 30,00 % | 18,76 % | 10,00 % | 10,80 % | 0,00 % | 0,00 % |
| **INFORMATION SOCIETY** | **622** | **4051** | **6,51** | **838,97** | **1,35** | **61,90 %** | **81,84 %** | **2,41 %** | **0,36 %** | **4,34 %** | **2,97 %** | **0,32 %** | **0,10 %** | **31,03 %** | **14,74 %** |
| Systems and services for the citizen | 104 | 729 | 7,01 | 131,90 | 1,27 | 78,85 % | 89,41 % | 0,00 % | 0,00 % | 1,92 % | 1,27 % | 0,00 % | 0,00 % | 19,23 % | 9,31 % |
| New methods of work and electronic commerce | 131 | 878 | 6,70 | 124,34 | 0,95 | 46,56 % | 62,55 % | 0,00 % | 0,00 % | 3,82 % | 4,12 % | 1,53 % | 0,64 % | 48,09 % | 32,69 % |
| Multimedia content and tools | 76 | 547 | 7,20 | 101,64 | 1,34 | 76,32 % | 89,58 % | 0,00 % | 0,00 % | 1,32 % | 0,54 % | 0,00 % | 0,00 % | 22,37 % | 9,88 % |
| Essential technologies and infrastructures | 148 | 838 | 5,66 | 210,19 | 1,42 | 55,41 % | 82,65 % | 0,00 % | 0,00 % | 3,38 % | 1,77 % | 0,00 % | 0,00 % | 41,22 % | 15,58 % |
| Cross-programme themes | 47 | 379 | 8,06 | 74,08 | 1,58 | 80,85 % | 82,67 % | 0,00 % | 0,00 % | 4,26 % | 2,12 % | 0,00 % | 0,00 % | 14,89 % | 15,20 % |
| RTD activities of a generic nature | 50 | 284 | 5,68 | 61,70 | 1,23 | 86,00 % | 94,83 % | 0,00 % | 0,00 % | 6,00 % | 4,54 % | 0,00 % | 0,00 % | 8,00 % | 0,65 % |
| Support to infrastructures | 66 | 396 | 6,00 | 135,13 | 2,05 | 31,82 % | 78,70 % | 22,73 % | 2,22 % | 13,64 % | 7,00 % | 0,00 % | 0,00 % | 31,82 % | 12,08 % |
| **SUSTAINABLE GROWTH** | **542** | **4054** | **7,48** | **821,73** | **1,52** | **92,07 %** | **96,15 %** | **0,00 %** | **0,00 %** | **2,40 %** | **1,92 %** | **0,00 %** | **0,00 %** | **5,54 %** | **1,94 %** |
| Innovative products, processes and organisation | 185 | 1.095 | 5,92 | 177,34 | 0,96 | 95,14 % | 98,07 % | 0,00 % | 0,00 % | 1,08 % | 1,54 % | 0,00 % | 0,00 % | 3,78 % | 0,39 % |
| Sustainable mobility and intermodality | 32 | 393 | 12,28 | 64,79 | 2,02 | 53,13 % | 62,51 % | 0,00 % | 0,00 % | 25,00 % | 16,98 % | 0,00 % | 0,00 % | 21,88 % | 20,50 % |
| Land transport and marine technologies | 82 | 647 | 7,89 | 119,92 | 1,46 | 98,78 % | 99,89 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 1,22 % | 0,10 % |
| New perspectives for aeronautics | 62 | 750 | 12,10 | 259,67 | 4,19 | 90,32 % | 99,43 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 9,68 % | 0,56 % |
| RTD activities of a generic nature | 179 | 1.149 | 6,42 | 198,79 | 1,11 | 94,41 % | 99,43 % | 0,00 % | 0,00 % | 0,56 % | 0,39 % | 0,00 % | 0,00 % | 5,03 % | 0,17 % |
| Support to infrastructures | 2 | 20 | 10,00 | 1,24 | 0,62 | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 100,00 % | 100,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % |

| | ALL FP5 CONTRACTS SIGNED IN 2000 | | | | | SHARED-COST ACTIONS | | FELLOWSHIPS | | SUPPORT TO NETWORKS | | CONCERTED ACTIONS | | ACCOMPANYING MEASURES | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | B | C=B/A | D | E=D/A | F | G | H | I | J | K | L | M | N | O |
| | Number of contracts signed | Number of partici-pations | Average number of partici-pations per contract | Community financial contribution (€ million) | Average financial contribu-tion per contract (€ million) | Number of contracts signed | Commu-nity financial contrib. (%) | Number of contracts signed | Community financial contrib. (%) | Number of contracts signed | Commu-nity financial contrib. (%) | Number of contracts signed | Commu-nity financial contrib. (%) | Number of contracts signed | Commu-nity financial contrib. (%) |
| **ENERGY & ENVIRONMENT** | **443** | **3237** | **7,31** | **447,44** | **1,01** | **79,31 %** | **95,17 %** | **2,41 %** | **0,38 %** | **1,72 %** | **1,51 %** | **1,21 %** | **0,49 %** | **15,34 %** | **2,45 %** |
| ***ENVIRONMENT*** | ***251*** | ***2048*** | ***8,16*** | ***277,92*** | ***1, 11*** | ***93,63 %*** | ***97,15 %*** | ***0,00 %*** | ***0,00 %*** | ***1,99 %*** | ***2,11 %*** | ***1,99 %*** | ***0,69 %*** | ***2,39 %*** | ***0,05 %*** |
| Sustainable management and quality of water | 67 | 447 | 6,67 | 75,41 | 1,13 | 95,52 % | 98,93 % | 0,00 % | 0,00 % | 1,49 % | 1,02 % | 0,00 % | 0,00 % | 2,99 % | 0,05 % |
| Global change, climate and biodiversity | 87 | 768 | 8,83 | 98,87 | 1,14 | 90,80 % | 98,37 % | 0,00 % | 0,00 % | 1,15 % | 0,48 % | 3,45 % | 1,04 % | 4,60 % | 0,11 % |
| Sustainable marine ecosystems | 32 | 235 | 7,34 | 40,21 | 1,26 | 100,00 % | 100,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % |
| The city of tomorrow and cultural heritage | 32 | 299 | 9,34 | 32,41 | 1,01 | 90,63 % | 94,08 % | 0,00 % | 0,00 % | 6,25 % | 5,15 % | 3,13 % | 0,77 % | 0,00 % | 0,00 % |
| RTD activities of a generic nature | 23 | 172 | 7,48 | 18,19 | 0,79 | 100,00 % | 100,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % |
| Support for research infrastructures | 10 | 127 | 12,70 | 12,83 | 1,28 | 80,00 % | 72,02 % | 0,00 % | 0,00 % | 10,00 % | 23,07 % | 10,00 % | 4,91 % | 0,00 % | 0,00 % |
| ***ENERGY*** | ***192*** | ***1189*** | ***6,19*** | ***169,52*** | ***0,88*** | ***85,42%*** | ***96,75%*** | ***7,29%*** | ***1,23%*** | ***2,08%*** | ***1,27%*** | ***0,52%*** | ***0,15%*** | ***4,69%*** | ***0,59%*** |
| Cleaner energy systems, incl. renewables | 80 | 458 | 5,73 | 70,12 | 0,88 | 85,00% | 97,15% | 7,50% | 1,00% | 1,25% | 0,84% | 0,00% | 0,00% | 6,25% | 1,00% |
| Economic and efficient energy | 105 | 657 | 6,26 | 96,46 | 0,92 | 85,71% | 96,58% | 7,62% | 1,42% | 1,90% | 1,42% | 0,95% | 0,27% | 3,81% | 0,31% |
| RTD activities of a generic nature | 7 | 74 | 10,57 | 2,94 | 0,42 | 85,71% | 92,86% | 0,00% | 0,00% | 14,29% | 6,80% | 0,00% | 0,00% | 0,00% | 0,00% |
| **NUCLEAR ENERGY** | **307** | **1316** | **4,29** | **232,59** | **0,76** | **84,36 %** | **96,39 %** | **3,26 %** | **0,43 %** | **5,54 %** | **2,14 %** | **2,93 %** | **0,77 %** | **3,91 %** | **0,25 %** |
| Controlled thermonuclear fusion | 168 | 232 | 1,38 | 138,58 | 0,01 | 98,81 % | 99,82 % | 1,19 % | 0,17 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % |
| Nuclear fission | 93 | 735 | 7,90 | 66,69 | 0,08 | 73,12 % | 92,40 % | 6,45 % | 0,85 % | 9,68 % | 4,78 % | 4,30 % | 1,59 % | 6,45 % | 0,37 % |
| RTD activities of a generic nature | 37 | 244 | 6,59 | 25,37 | 0,18 | 67,57 % | 95,59 % | 5,41 % | 0,79 % | 2,70 % | 0,79 % | 8,11 % | 1,54 % | 16,22 % | 1,30 % |
| Support for infrastructure | 9 | 105 | 11,67 | 1,95 | 1,30 | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 77,78 % | 82,05 % | 22,22 % | 17,95 % | 0,00 % | 0,00 % |
| **INTERNATIONAL ROLE** | **236** | **960** | **4,07** | **105,46** | **0,45** | **44,92 %** | **70,27 %** | **10,59 %** | **2,10 %** | **0,42 %** | **0,34 %** | **2,97 %** | **2,96 %** | **41,10 %** | **24,33 %** |
| Countries in the pre-accession phase | 41 | 49 | 1,20 | 20,05 | 0,49 | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 100 % | 100 % |
| NIS and CEEC not in the pre-accession phase | 64 | 363 | 5,67 | 29,79 | 0,47 | 78,13 % | 92,78 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 21,88 % | 7,18 % |
| Mediterranean partner countries | 28 | 130 | 4,64 | 12,82 | 0,46 | 53,57 % | 87,75 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 7,14 % | 7,72 % | 39,29 % | 4,45 % |
| Developing countries | 73 | 354 | 4,85 | 39,68 | 0,54 | 56,16 % | 88,73 % | 0,00 % | 0,00 % | 1,37 % | 0,91 % | 6,85 % | 5,34 % | 35,62 % | 4,99 % |
| Emerging economies and industrialised countries | 3 | 4 | 1,33 | 0,42 | 0,14 | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 100 % | 100 % |
| Fellowships for developing countries | 8 | 24 | 3,00 | 0,17 | 0,02 | 0,00 % | 0,00 % | 100 % | 100 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % |
| Fellowships for Community researchers | 17 | 34 | 2,00 | 2,04 | 0,12 | 0,00 % | 0,00 % | 100 % | 100 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % |
| Coordination | 2 | 2 | 1,00 | 0,49 | 0,25 | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 100 % | 100 % |

| | ALL FP5 CONTRACTS SIGNED IN 2000 | | | | | SHARED-COST ACTIONS | | FELLOWSHIPS | | SUPPORT TO NETWORKS | | CONCERTED ACTIONS | | ACCOMPANYING MEASURES | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | B | C=B/A | D | E=D/A | F | G | H | I | J | K | L | M | N | O |
| | Number of contracts signed | Number of partici-pations | Average number of partici-pations per contract | Community financial contribution (€ million) | Average financial contribu-tion per contract (€ million) | Number of contracts signed | Commu-nity financial contrib. (%) | Number of contracts signed | Commu-nity financial contrib. (%) | Number of contracts signed | Commu-nity financial contrib. (%) | Number of contracts signed | Commu-nity financial contrib. (%) | Number of contracts signed | Commu-nity financial contrib. (%) |
| **INNOVATION – SMEs** | **171** | **994** | **5,81** | **94,55** | 0,55 | **22,81 %** | **23,24 %** | **0,00 %** | **0,00 %** | **2,34 %** | **3,11 %** | **0,00 %** | **0,00 %** | **74,85 %** | **73,65 %** |
| Promotion of innovation | 21 | 144 | 6,86 | 16,91 | 0,81 | 71,43 % | 74,45 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 28,57 % | 25,55 % |
| Joint innovation/SME activities | 97 | 362 | 3,73 | 48,56 | 0,50 | 24,74 % | 19,32 % | 0,00 % | 0,00 % | 4,12 % | 6,05 % | 0,00 % | 0,00 % | 71,13 % | 74,63 % |
| Economic and technological intelligence | 53 | 488 | 9,21 | 29,08 | 0,55 | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 100 % | 100,00 % |
| **HUMAN POTENTIAL** | **1570** | **3891** | **2,48** | **467,73** | **0,30** | **6,69 %** | **17,70 %** | **54,46 %** | **28,15 %** | **13,06 %** | **50,16 %** | **0,00 %** | **0,00 %** | **25,80 %** | **3,99 %** |
| Research training networks | 167 | 1.339 | 8,02 | 218,66 | 1,31 | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 100 % | 100 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % |
| Marie-Curie fellowship | 855 | 1.368 | 1,60 | 131,68 | 0,15 | 0,00 % | 0,00 % | 100 % | 100 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % |
| Access to research infrastructures | 87 | 313 | 3,60 | 62,24 | 0,72 | 78,16 % | 85,52 % | 0,00 % | 0,00 % | 21,84 % | 14,48 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % |
| Socio-economic research | 43 | 303 | 7,05 | 31,54 | 0,73 | 86,05 % | 93,69 % | 0,00 % | 0,00 % | 13,95 % | 6,31 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % |
| Public perception | 14 | 82 | 5,86 | 3,40 | 0,24 | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 57,14 % | 70,59 % | 0,00 % | 0,00 % | 42,86 % | 29,41 % |
| Support for S&T policies | 8 | 90 | 11,25 | 3,38 | 0,42 | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 62,50 % | 75,44 % | 0,00 % | 0,00 % | 37,50 % | 24,56 % |
| Promoting S&T excellence | 396 | 396 | 1,00 | 16,82 | 0,04 | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 0,00 % | 100 % | 100 % |
| **TOTAL FP5 IN 2000** | **4955** | **23714** | **4,79** | **3981,1** | **0,80** | **50,35%** | **80,39%** | **23,10%** | **4,47%** | **6,08%** | **7,80%** | **1,27%** | **0,71%** | **19,20%** | **6,64%** |

## TABLE 3A – CONTRACTS SIGNED BY TYPE OF BENEFICIARY (IN € MILLION)

| | TYPES OF BENEFICIARY | | | | | | | | | | of which SMEs | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Higher education | | Research centres (including JRC) | | Enterprise sector | | Others[27] | | TOTAL | | Total No of SMEs | | SMEs from the enterprise sector | |
| | Contri-bution | Partici-pations | Contri-bution | Partici-pations | Contri-bution | Partici-pations | Contri-bution | Partici-pations | Contri-bution | Partici-pations | Contri-bution | Partici-pations | Contri-bution | Partici-pations |
| **QUALITY OF LIFE** | **401,23** | **1.789** | **353,35** | **1.634** | **75,07** | **575** | **46,20** | **519** | **875,84** | **4.517** | **111,94** | **904** | **75,28** | **694** |
| Food, nutrition and health | 43,01 | 191 | 45,86 | 228 | 9,27 | 97 | 13,11 | 128 | 111,25 | 644 | 18,97 | 193 | 11,30 | 152 |
| Control of infectious diseases | 51,10 | 232 | 45,26 | 184 | 14,82 | 65 | 7,16 | 67 | 118,34 | 548 | 12,45 | 74 | 7,40 | 41 |
| The "cell factory" | 75,96 | 308 | 56,91 | 251 | 15,39 | 101 | 4,37 | 52 | 152,63 | 712 | 20,96 | 140 | 16,93 | 119 |
| Environment and health | 26,46 | 126 | 27,78 | 137 | 4,21 | 25 | 0,94 | 21 | 59,39 | 309 | 5,93 | 41 | 3,06 | 27 |
| Sustainable agriculture, fisheries and forestry | 71,88 | 322 | 78,11 | 412 | 15,29 | 178 | 5,07 | 125 | 170,35 | 1.037 | 35,06 | 325 | 25,11 | 265 |
| The ageing population and disabilities | 34,89 | 149 | 18,09 | 87 | 3,91 | 28 | 1,45 | 16 | 58,34 | 280 | 2,85 | 27 | 1,88 | 20 |
| RTD activities of a generic nature | 93,10 | 431 | 77,01 | 309 | 11,56 | 78 | 10,16 | 80 | 191,83 | 898 | 14,77 | 92 | 9,07 | 62 |
| Support to infrastructures | 4,82 | 30 | 4,33 | 26 | 0,62 | 3 | 3,94 | 30 | 13,70 | 89 | 0,94 | 12 | 0,54 | 8 |
| **INFORMATION SOCIETY** | **189,22** | **1.022** | **121,43** | **572** | **528,32** | **2.457** | **0,00** | **0** | **838,97** | **4.051** | **285,15** | **1.182** | **279,33** | **1.124** |
| Systems and services for the citizen | 20,95 | 92 | 17,30 | 82 | 93,65 | 555 | 0,00 | 0 | 131,90 | 729 | 55,52 | 302 | 53,66 | 280 |
| New methods of work and electronic commerce | 20,63 | 123 | 12,99 | 82 | 90,73 | 673 | 0,00 | 0 | 124,34 | 878 | 54,08 | 414 | 52,17 | 400 |
| Multimedia content and tools | 37,14 | 198 | 19,01 | 82 | 45,50 | 267 | 0,00 | 0 | 101,64 | 547 | 23,20 | 124 | 22,13 | 112 |
| Essential technologies and infrastructures | 39,01 | 178 | 36,35 | 121 | 134,83 | 539 | 0,00 | 0 | 210,19 | 838 | 40,57 | 193 | 40,22 | 190 |
| Cross-programme themes | 21,57 | 133 | 11,02 | 48 | 41,49 | 198 | 0,00 | 0 | 74,08 | 379 | 15,56 | 69 | 15,02 | 64 |
| RTD activities of a generic nature | 38,12 | 181 | 14,02 | 63 | 9,56 | 40 | 0,00 | 0 | 61,70 | 284 | 3,90 | 13 | 3,90 | 13 |
| Support to infrastructures | 11,83 | 117 | 10,75 | 94 | 112,56 | 185 | 0,00 | 0 | 135,13 | 396 | 92,31 | 67 | 92,23 | 65 |
| **SUSTAINABLE GROWTH** | **163,16** | **758** | **212,78** | **1.056** | **437,10** | **2.183** | **8,69** | **57** | **821,73** | **4.054** | **169,27** | **1.325** | **150,50** | **1.219** |
| Innovative products, processes and organisation | 39,48 | 172 | 46,75 | 220 | 90,32 | 695 | 0,79 | 8 | 177,34 | 1.095 | 64,39 | 554 | 58,65 | 528 |
| Sustainable mobility and intermodality | 10,67 | 64 | 18,72 | 112 | 29,87 | 185 | 5,53 | 32 | 64,79 | 393 | 5,74 | 34 | 4,93 | 29 |
| Land transport and marine technologies | 28,16 | 129 | 33,62 | 159 | 57,76 | 357 | 0,37 | 2 | 119,92 | 647 | 19,45 | 148 | 17,36 | 137 |
| New perspectives for aeronautics | 33,06 | 164 | 40,67 | 189 | 184,82 | 390 | 1,11 | 7 | 259,67 | 750 | 20,90 | 134 | 18,55 | 116 |
| RTD activities of a generic nature | 51,78 | 229 | 72,29 | 365 | 73,90 | 548 | 0,81 | 7 | 198,79 | 1.149 | 58,25 | 451 | 50,48 | 405 |
| Support to infrastructures | 0,00 | 0 | 0,73 | 11 | 0,43 | 8 | 0,08 | 1 | 1,24 | 20 | 0,54 | 4 | 0,54 | 4 |

[27] "Others" covers all participations which could not be allocated to any of the first three categories.

| | TYPES OF BENEFICIARY | | | | | | | | | | of which SMEs | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Higher education | | Research centres (including JRC) | | Enterprise sector | | Others | | TOTAL | | Total No of SMEs | | SMEs from the enterprise sector | |
| | Contri-bution | Partici-pations | Contri-bution | Partici-pations | Contri-bution | Partici-pations | Contri-bution | Partici-pations | Contri-bution | Partici-pations | Contri-bution | Partici-pations | Contri-bution | Partici-pations |
| **ENERGY & ENVIRONMENT** | **172,57** | **1.108** | **178,07** | **1.240** | **94,42** | **867** | **2,38** | **22** | **447,44** | **3.237** | **109,90** | **968** | **73,34** | **691** |
| ***ENVIRONMENT*** | ***129,02*** | ***840*** | ***117,10*** | ***854*** | ***30,56*** | ***342*** | ***1,24*** | ***12*** | ***277,92*** | ***2.048*** | ***68,41*** | ***568*** | ***37,84*** | ***348*** |
| Sustainable management and quality of water | 38,61 | 196 | 27,24 | 149 | 8,89 | 98 | 0,65 | 4 | 75,41 | 447 | 15,82 | 126 | 10,39 | 90 |
| Global change, climate and biodiversity | 45,14 | 327 | 46,38 | 364 | 6,88 | 71 | 0,47 | 6 | 98,87 | 768 | 21,11 | 167 | 8,78 | 90 |
| Sustainable marine ecosystems | 19,64 | 101 | 18,94 | 106 | 1,63 | 28 | 0,00 | 0 | 40,21 | 235 | 11,25 | 67 | 6,01 | 41 |
| The city of tomorrow and cultural heritage | 12,67 | 99 | 10,47 | 96 | 9,25 | 103 | 0,02 | 1 | 32,41 | 299 | 11,70 | 111 | 7,73 | 77 |
| RTD activities of a generic nature | 7,00 | 61 | 7,61 | 75 | 3,49 | 35 | 0,10 | 1 | 18,19 | 172 | 5,84 | 60 | 4,46 | 36 |
| Support for research infrastructures | 5,96 | 56 | 6,46 | 64 | 0,41 | 7 | 0,00 | 0 | 12,83 | 127 | 2,69 | 37 | 0,46 | 14 |
| ***ENERGY*** | ***43,55*** | ***268*** | ***60,97*** | ***386*** | ***63,86*** | ***525*** | ***1,14*** | ***10*** | ***169,52*** | ***1.189*** | ***41,49*** | ***400*** | ***35,50*** | ***343*** |
| Cleaner energy systems, incl. renewables | 20,23 | 118 | 22,50 | 135 | 26,94 | 201 | 0,45 | 4 | 70,12 | 458 | 15,28 | 152 | 13,07 | 131 |
| Economic and efficient energy | 22,62 | 136 | 37,15 | 223 | 36,02 | 293 | 0,68 | 5 | 96,46 | 657 | 24,70 | 217 | 21,52 | 193 |
| RTD activities of a generic nature | 0,70 | 14 | 1,32 | 28 | 0,90 | 31 | 0,01 | 1 | 2,94 | 74 | 1,51 | 31 | 0,91 | 19 |
| **NUCLEAR ENERGY** | **27,88** | **218** | **128,31** | **817** | **75,46** | **269** | **0,94** | **12** | **232,59** | **1.316** | **13,40** | **163** | **7,94** | **103** |
| Controlled thermonuclear fusion | 7,91 | 26 | 68,12 | 168 | 62,54 | 38 | 0,00 | 0 | 138,58 | 232 | 0,57 | 2 | 0,57 | 2 |
| Nuclear fission | 10,78 | 104 | 44,69 | 441 | 10,34 | 182 | 0,89 | 8 | 66,69 | 735 | 10,01 | 113 | 5,79 | 70 |
| RTD activities of a generic nature | 8,82 | 76 | 14,17 | 140 | 2,35 | 26 | 0,03 | 2 | 25,37 | 244 | 2,68 | 35 | 1,44 | 18 |
| Support for infrastructure | 0,37 | 12 | 1,34 | 68 | 0,23 | 23 | 0,01 | 2 | 1,95 | 105 | 0,14 | 13 | 0,14 | 13 |
| **INTERNATIONAL ROLE** | **32,28** | **297** | **38,38** | **387** | **5,11** | **69** | **29,68** | **207** | **105,46** | **960** | **32,16** | **266** | **21,07** | **135** |
| Countries in the pre-accession phase | 0,00 | 0 | 0,00 | 0 | 0,00 | 0 | 20,05 | 49 | 20,05 | 49 | 12,93 | 30 | 12,93 | 30 |
| NIS and CEEC not in the pre-accession phase | 8,97 | 100 | 16,26 | 206 | 2,37 | 40 | 2,19 | 17 | 29,79 | 363 | 8,74 | 128 | 4,34 | 50 |
| Mediterranean partner countries | 6,41 | 51 | 4,08 | 32 | 0,71 | 10 | 1,63 | 37 | 12,82 | 130 | 2,92 | 35 | 1,05 | 20 |
| Developing countries | 16,90 | 146 | 18,05 | 149 | 2,04 | 19 | 2,69 | 40 | 39,68 | 354 | 7,32 | 67 | 2,51 | 29 |
| Emerging economies and industrialised countries | 0,00 | 0 | 0,00 | 0 | 0,00 | 0 | 0,42 | 4 | 0,42 | 4 | 0,22 | 3 | 0,22 | 3 |
| Fellowships for developing countries | 0,00 | 0 | 0,00 | 0 | 0,00 | 0 | 0,17 | 24 | 0,17 | 24 | 0,02 | 2 | 0,02 | 2 |
| Fellowships for Community researchers | | 0 | | 0 | | 0 | 2,04 | 34 | 2,04 | 34 | 0,00 | 1 | 0,00 | 1 |
| Coordination | | 0 | | 0 | | 0 | 0,49 | 2 | 0,49 | 2 | 0,00 | 0 | 0,00 | 0 |

| | TYPE OF BENEFICIARY | | | | | | | | | | of which SMEs | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Higher education | | Research centres (including JRC) | | Enterprise sector | | Others | | TOTAL | | Total No of SMEs | | SMEs from the enterprise sector | |
| | Contri-bution | Partici-pations | Contri-bution | Partici-pations | Contri-bution | Partici-pations | Contri-bution | Partici-pations | Contri-bution | Partici-pations | Contri-bution | Partici-pations | Contri-bution | Partici-pations |
| **INNOVATION – SMEs** | **11,11** | **103** | **14,73** | **117** | **29,83** | **443** | **38,88** | **331** | **94,55** | **994** | **33,64** | **380** | **28,47** | **343** |
| Promotion of innovation | 2,99 | 21 | 4,23 | 30 | 6,27 | 48 | 3,41 | 45 | 16,91 | 144 | 8,17 | 79 | 7,79 | 77 |
| Joint innovation/SME activities | 5,50 | 48 | 8,17 | 58 | 1,75 | 9 | 33,14 | 247 | 48,56 | 362 | 18,35 | 114 | 13,56 | 79 |
| Economic and technological intelligence | 2,62 | 34 | 2,33 | 29 | 21,81 | 386 | 2,33 | 39 | 29,08 | 488 | 7,12 | 187 | 7,12 | 187 |
| **HUMAN POTENTIAL** | **260,71** | **2.217** | **174,58** | **1.309** | **23,16** | **274** | **9,29** | **91** | **467,74** | **3.891** | **56,73** | **409** | **49,26** | **365** |
| Research training networks | 139,02 | 846 | 71,55 | 430 | 5,24 | 46 | 2,86 | 17 | 218,66 | 1.339 | 28,56 | 181 | 28,56 | 181 |
| Marie-Curie fellowship | 74,18 | 865 | 43,07 | 422 | 9,62 | 49 | 4,82 | 32 | 131,68 | 1.368 | 4,03 | 18 | 3,69 | 16 |
| Access to research infrastructures | 16,97 | 95 | 43,24 | 169 | 1,23 | 21 | 0,81 | 28 | 62,24 | 313 | 12,36 | 54 | 9,00 | 47 |
| Socio-economic research | 21,21 | 180 | 9,06 | 99 | 0,94 | 21 | 0,34 | 3 | 31,54 | 303 | 8,35 | 86 | 4,58 | 51 |
| Public perception | 1,63 | 28 | 0,99 | 25 | 0,77 | 28 | 0,01 | 1 | 3,40 | 82 | 1,58 | 31 | 1,58 | 31 |
| Support for S&T policies | 1,02 | 34 | 1,21 | 30 | 1,03 | 23 | 0,12 | 3 | 3,38 | 90 | 1,37 | 26 | 1,37 | 26 |
| Promoting S&T excellence | 6,68 | 169 | 5,46 | 134 | 4,33 | 86 | 0,34 | 7 | 16,82 | 396 | 0,48 | 13 | 0,48 | 13 |
| **TOTAL** | **1.258,16** | **7512** | **1221,63** | **7132** | **1.268,47** | **7.137** | **136,06** | **1.239** | **3.884,32** | **23.020** | **812,20** | **5.597** | **685,20** | **4.674** |

## TABLE 3B: CONTRACTS SIGNED BY TYPE OF BENEFICIARY (%)

| | TYPES OF BENEFICIARY | | | | | | | | | | OF WHICH SMEs | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Higher education | | Research centres (including JRC) | | Enterprise sector | | Others[28] | | TOTAL | | Total No of SMEs | | SMEs from the enterprise sector | |
| | Contri-bution | Partici-pations | Contri-bution | Partici-pations | Contri-bution | Partici-pations | Contri-bution | Partici-pations | Contri-bution | Partici-pations | Contri-bution | Partici-pations | Contri-bution | Partici-pations |
| **QUALITY OF LIFE** | **45,81%** | **39,61%** | **40,34%** | **36,17%** | **8,57%** | **12,73%** | **5,27%** | **11,49%** | **100,00%** | **100,00%** | **12,78%** | **20,01%** | **8,60%** | **15,36%** |
| Food, nutrition and health | 38,66% | 29,66% | 41,23% | 35,40% | 8,33% | 15,06% | 11,78% | 19,88% | 100,00% | 100,00% | 17,05% | 29,97% | 10,16% | 23,60% |
| Control of infectious diseases | 43,18% | 42,34% | 38,25% | 33,58% | 12,52% | 11,86% | 6,05% | 12,23% | 100,00% | 100,00% | 10,52% | 13,50% | 6,25% | 7,48% |
| The "cell factory" | 49,77% | 43,26% | 37,29% | 35,25% | 10,08% | 14,19% | 2,86% | 7,30% | 100,00% | 100,00% | 13,73% | 19,66% | 11,09% | 16,71% |
| Environment and health | 44,55% | 40,78% | 46,77% | 44,34% | 7,09% | 8,09% | 1,59% | 6,80% | 100,00% | 100,00% | 9,99% | 13,27% | 5,15% | 8,74% |
| Sustainable agriculture, fisheries and forestry | 42,20% | 31,05% | 45,85% | 39,73% | 8,98% | 17,16% | 2,98% | 12,05% | 100,00% | 100,00% | 20,58% | 31,34% | 14,74% | 25,55% |
| The ageing population and disabilities | 59,81% | 53,21% | 31,01% | 31,07% | 6,70% | 10,00% | 2,48% | 5,71% | 100,00% | 100,00% | 4,88% | 9,64% | 3,22% | 7,14% |
| RTD activities of a generic nature | 48,53% | 48,00% | 40,14% | 34,41% | 6,03% | 8,69% | 5,30% | 8,91% | 100,00% | 100,00% | 7,70% | 10,24% | 4,73% | 6,90% |
| Support to infrastructures | 35,20% | 33,71% | 31,57% | 29,21% | 4,50% | 3,37% | 28,72% | 33,71% | 100,00% | 100,00% | 6,90% | 13,48% | 3,92% | 8,99% |
| **INFORMATION SOCIETY** | **22,55%** | **25,23%** | **14,47%** | **14,12%** | **62,97%** | **60,65%** | **0%** | **0%** | **100,00%** | **100,00%** | **33,99%** | **29,18%** | **33,29%** | **27,75%** |
| Systems and services for the citizen | 15,88% | 12,62% | 13,11% | 11,25% | 71,00% | 76,13% | 0% | 0% | 100,00% | 100,00% | 42,09% | 41,43% | 40,68% | 38,41% |
| New methods of work and electronic commerce | 16,59% | 14,01% | 10,44% | 9,34% | 72,97% | 76,65% | 0% | 0% | 100,00% | 100,00% | 43,50% | 47,15% | 41,96% | 45,56% |
| Multimedia content and tools | 36,54% | 36,20% | 18,70% | 14,99% | 44,76% | 48,81% | 0% | 0% | 100,00% | 100,00% | 22,83% | 22,67% | 21,77% | 20,48% |
| Essential technologies and infrastructures | 18,56% | 21,24% | 17,30% | 14,44% | 64,15% | 64,32% | 0% | 0% | 100,00% | 100,00% | 19,30% | 23,03% | 19,13% | 22,67% |
| Cross-programme themes | 29,11% | 35,09% | 14,87% | 12,66% | 56,01% | 52,24% | 0% | 0% | 100,00% | 100,00% | 21,01% | 18,21% | 20,28% | 16,89% |
| RTD activities of a generic nature | 61,78% | 63,73% | 22,73% | 22,18% | 15,49% | 14,08% | 0% | 0% | 100,00% | 100,00% | 6,32% | 4,58% | 6,32% | 4,58% |
| Support to infrastructures | 8,75% | 29,55% | 7,95% | 23,74% | 83,30% | 46,72% | 0% | 0% | 100,00% | 100,00% | 68,31% | 16,92% | 68,25% | 16,41% |
| **SUSTAINABLE GROWTH** | **19,86%** | **18,70%** | **25,89%** | **26,05%** | **53,19%** | **53,85%** | **1,06%** | **1,41%** | **100,00%** | **100,00%** | **20,60%** | **32,68%** | **18,31%** | **30,07%** |
| Innovative products, processes and organisation | 22,26% | 15,71% | 26,36% | 20,09% | 50,93% | 63,47% | 0,44% | 0,73% | 100,00% | 100,00% | 36,31% | 50,59% | 33,07% | 48,22% |
| Sustainable mobility and intermodality | 16,47% | 16,28% | 28,89% | 28,50% | 46,11% | 47,07% | 8,54% | 8,14% | 100,00% | 100,00% | 8,86% | 8,65% | 7,60% | 7,38% |
| Land transport and marine technologies | 23,49% | 19,94% | 28,04% | 24,57% | 48,16% | 55,18% | 0,31% | 0,31% | 100,00% | 100,00% | 16,22% | 22,87% | 14,48% | 21,17% |
| New perspectives for aeronautics | 12,73% | 21,87% | 15,66% | 25,20% | 71,18% | 52,00% | 0,43% | 0,93% | 100,00% | 100,00% | 8,05% | 17,87% | 7,14% | 15,47% |
| RTD activities of a generic nature | 26,05% | 19,93% | 36,37% | 31,77% | 37,18% | 47,69% | 0,41% | 0,61% | 100,00% | 100,00% | 29,30% | 39,25% | 25,39% | 35,25% |
| Support to infrastructures | 0% | 0% | 59,03% | 55,00% | 34,78% | 40,00% | 6,19% | 5,00% | 100,00% | 100,00% | 43,43% | 20,00% | 43,43% | 20,00% |

[28] "Others" covers all participations which could not be allocated to any of the first three categories.

| | TYPES OF BENEFICIARY | | | | | | | | | | OF WHICH SMEs | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Higher education | | Research centres (including JRC) | | Enterprise sector | | Others | | TOTAL | | Total No of SMEs | | SMEs from the enterprise sector | |
| | Contri-bution | Partici-pations | Contri-bution | Partici-pations | Contri-bution | Partici-pations | Contri-bution | Partici-pations | Contri-bution | Partici-pations | Contri-bution | Partici-pations | Contri-bution | Partici-pations |
| **ENERGY & ENVIRONMENT** | **38,57%** | **34,23%** | **39,80%** | **38,31%** | **21,10%** | **26,78%** | **0,53%** | **0,68%** | **100,00%** | **100,00%** | **24,56%** | **29,90%** | **16,39%** | **21,35%** |
| ***ENVIRONMENT*** | ***46,42%*** | ***41,02%*** | ***42,13%*** | ***41,70%*** | ***11,00%*** | ***16,70%*** | ***0,45%*** | ***0,59%*** | ***100,00%*** | ***100,00%*** | ***24,62%*** | ***27,73%*** | ***13,62%*** | ***16,99%*** |
| Sustainable management and quality of water | 51,21% | 43,85% | 36,13% | 33,33% | 11,80% | 21,92% | 0,87% | 0,89% | 100,00% | 100,00% | 20,98% | 28,19% | 13,78% | 20,13% |
| Global change, climate and biodiversity | 45,66% | 42,58% | 46,91% | 47,40% | 6,95% | 9,24% | 0,48% | 0,78% | 100,00% | 100,00% | 21,35% | 21,74% | 8,88% | 11,72% |
| Sustainable marine ecosystems | 48,85% | 42,98% | 47,09% | 45,11% | 4,06% | 11,91% | 0% | 0% | 100,00% | 100,00% | 27,98% | 28,51% | 14,96% | 17,45% |
| The city of tomorrow and cultural heritage | 39,10% | 33,11% | 32,31% | 32,11% | 28,54% | 34,45% | 0,06% | 0,33% | 100,00% | 100,00% | 36,09% | 37,12% | 23,86% | 25,75% |
| RTD activities of a generic nature | 38,46% | 35,47% | 41,80% | 43,60% | 19,19% | 20,35% | 0,54% | 0,58% | 100,00% | 100,00% | 32,10% | 34,88% | 24,51% | 20,93% |
| Support for research infrastructures | 46,43% | 44,09% | 50,34% | 50,39% | 3,23% | 5,51% | 0% | 0% | 100,00% | 100,00% | 20,97% | 29,13% | 3,56% | 11,02% |
| ***ENERGY*** | *25,69%* | *22,54%* | *35,97%* | *32,46%* | *37,67%* | *44,15%* | *0,67%* | *0,84%* | ***100,00%*** | ***100,00%*** | *24,47%* | *33,64%* | *20,94%* | *28,85%* |
| Cleaner energy systems, incl. renewables | 28,85% | 25,76% | 32,09% | 29,48% | 38,42% | 43,89% | 0,64% | 0,87% | 100,00% | 100,00% | 21,79% | 33,19% | 18,64% | 28,60% |
| Economic and efficient energy | 23,45% | 20,70% | 38,51% | 33,94% | 37,34% | 44,60% | 0,70% | 0,76% | 100,00% | 100,00% | 25,61% | 33,03% | 22,31% | 29,38% |
| RTD activities of a generic nature | 23,81% | 18,92% | 44,90% | 37,84% | 30,61% | 41,89% | 0,34% | 1,35% | 100,00% | 100,00% | 51,36% | 41,89% | 30,95% | 25,68% |
| **NUCLEAR ENERGY** | **11,99%** | **16,57%** | **55,17%** | **62,08%** | **32,44%** | **20,44%** | **0,40%** | **0,91%** | **100,00%** | **100,00%** | 5,76% | 12,39% | 3,41% | 7,83% |
| Controlled thermonuclear fusion | 5,71% | 11,21% | 49,16% | 72,41% | 45,13% | 16,38% | 0% | 0% | 100,00% | 100,00% | 0,41% | 0,86% | 0,41% | 0,86% |
| Nuclear fission | 16,16% | 14,15% | 67,00% | 60,00% | 15,50% | 24,76% | 1,34% | 1,09% | 100,00% | 100,00% | 15,01% | 15,37% | 8,69% | 9,52% |
| RTD activities of a generic nature | 34,77% | 31,15% | 55,83% | 57,38% | 9,28% | 10,66% | 0,12% | 0,82% | 100,00% | 100,00% | 10,57% | 14,34% | 5,66% | 7,38% |
| Support for infrastructure | 18,90% | 11,43% | 68,68% | 64,76% | 11,66% | 21,90% | 0,76% | 1,90% | 100,00% | 100,00% | 7,26% | 12,38% | 7,26% | 12,38% |
| **INTERNATIONAL ROLE** | **30,61%** | **30,94%** | **36,39%** | **40,31%** | **4,85%** | **7,19%** | **28,15%** | **21,56%** | **100,00%** | **100,00%** | **30,49%** | **27,71%** | **19,98%** | **14,06%** |
| Countries in the pre-accession phase | 0% | 0% | 0% | 0% | 0% | 0% | 100,00% | 100,00% | 100,00% | 100,00% | 64,48% | 61,22% | 64,48% | 61,22% |
| NIS and CEEC not in the pre-accession phase | 30,11% | 27,55% | 54,58% | 56,75% | 7,95% | 11,02% | 7,36% | 4,68% | 100,00% | 100,00% | 29,35% | 35,26% | 14,56% | 13,77% |
| Mediterranean partner countries | 49,99% | 39,23% | 31,79% | 24,62% | 5,50% | 7,69% | 12,72% | 28,46% | 100,00% | 100,00% | 22,80% | 26,92% | 8,19% | 15,38% |
| Developing countries | 42,59% | 41,24% | 45,48% | 42,09% | 5,14% | 5,37% | 6,79% | 11,30% | 100,00% | 100,00% | 18,45% | 18,93% | 6,34% | 8,19% |
| Emerging economies and industrialised countries | 0% | 0% | 0% | 0% | 0% | 0% | 100,00% | 100,00% | 100,00% | 100,00% | 52,60% | 75,00% | 52,60% | 75,00% |
| Fellowships for developing countries | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 13,13% | 8,33% | 13,13% | 8,33% |
| Fellowships for Community researchers | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0,00% | 2,94% | 0,00% | 2,94% |
| Coordination | 0% | 0% | 0% | 0% | 0% | 0% | 100,00% | 100,00% | 100,00% | 100,00% | 0,00% | 0,00% | 0,00% | 0,00% |

| | TYPE OF BENEFICIARY | | | | | | | | | | of which SMEs | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Higher education | | Research centres (including JRC) | | Enterprise sector | | Others | | TOTAL | | Total No of SMEs | | SMEs from the enterprise sector | |
| | Contri-bution | Partici-pations | Contri-bution | Partici-pations | Contri-bution | Partici-pations | Contri-bution | Partici-pations | Contri-bution | Partici-pations | Contri-bution | Partici-pations | Contri-bution | Partici-pations |
| **INNOVATION – SMEs** | **11,76%** | **10,36%** | **15,57%** | **11,77%** | **31,55%** | **44,57%** | **41,12%** | **33,30%** | **100,00%** | **100,00%** | **35,58%** | **38,23%** | **30,11%** | **34,51%** |
| Promotion of innovation | 17,70% | 14,58% | 25,04% | 20,83% | 37,09% | 33,33% | 20,17% | 31,25% | 100,00% | 100,00% | 48,31% | 54,86% | 46,06% | 53,47% |
| Joint innovation/SME activities | 11,33% | 13,26% | 16,82% | 16,02% | 3,60% | 2,49% | 68,25% | 68,23% | 100,00% | 100,00% | 37,79% | 31,49% | 27,93% | 21,82% |
| Economic and technological intelligence | 9,00% | 6,97% | 8,00% | 5,94% | 75,00% | 79,10% | 8,00% | 7,99% | 100,00% | 100,00% | 24,49% | 38,32% | 24,49% | 38,32% |
| **HUMAN POTENTIAL** | **55,74%** | **56,98%** | **37,32%** | **33,64%** | **4,95%** | **7,04%** | **1,99%** | **2,34%** | **100,00%** | **100,00%** | **12,13%** | **10,51%** | **10,53%** | **9,38%** |
| Research training networks | 63,58% | 63,18% | 32,72% | 32,11% | 2,39% | 3,44% | 1,31% | 1,27% | 100,00% | 100,00% | 13,06% | 13,52% | 13,06% | 13,52% |
| Marie-Curie fellowship | 56,33% | 63,23% | 32,70% | 30,85% | 7,31% | 3,58% | 3,66% | 2,34% | 100,00% | 100,00% | 3,06% | 1,32% | 2,81% | 1,17% |
| Access to research infrastructures | 27,26% | 30,35% | 69,47% | 53,99% | 1,97% | 6,71% | 1,30% | 8,95% | 100,00% | 100,00% | 19,85% | 17,25% | 14,45% | 15,02% |
| Socio-economic research | 67,24% | 59,41% | 28,73% | 32,67% | 2,96% | 6,93% | 1,07% | 0,99% | 100,00% | 100,00% | 26,48% | 28,38% | 14,52% | 16,83% |
| Public perception | 48,05% | 34,15% | 29,11% | 30,49% | 22,59% | 34,15% | 0,25% | 1,22% | 100,00% | 100,00% | 46,57% | 37,80% | 46,57% | 37,80% |
| Support for S&T policies | 30,11% | 37,78% | 35,65% | 33,33% | 30,60% | 25,56% | 3,64% | 3,33% | 100,00% | 100,00% | 40,54% | 28,89% | 40,54% | 28,89% |
| Promoting S&T excellence | 39,73% | 42,68% | 32,48% | 33,84% | 25,75% | 21,72% | 2,03% | 1,77% | 100,00% | 100,00% | 2,84% | 3,28% | 2,84% | 3,28% |
| **TOTAL** | **32,39%** | **32,63%** | **31,45%** | **30,98%** | **32,66%** | **31,00%** | **3,50%** | **5,38%** | **100,00%** | **100,00%** | **20,91%** | **24,31%** | **17,64%** | **20,30%** |

**TABLE 4 –PROPOSALS RECEIVED BY COUNTRY (REPRESENTATION)**

| | EUROPEAN UNION | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **BE** | **DK** | **DE** | **EL** | **ES** | **FR** | **IE** | **IT** | **LU** | **NL** | **AT** | **PT** | **FI** | **SV** | **UK** | **Total** |
| Quality of life | 652 | 631 | 1655 | 510 | 1123 | 1423 | 376 | 1377 | 16 | 1078 | 389 | 380 | 440 | 740 | 1975 | 12765 |
| Information society | 526 | 229 | 1420 | 824 | 933 | 1070 | 248 | 1238 | 60 | 494 | 361 | 276 | 295 | 405 | 1301 | 9680 |
| Sustainable growth | 479 | 254 | 1414 | 417 | 780 | 1129 | 207 | 1056 | 24 | 650 | 304 | 332 | 271 | 451 | 1256 | 9024 |
| Energy-environment | 318 | 388 | 1145 | 520 | 732 | 779 | 122 | 846 | 17 | 618 | 297 | 305 | 240 | 422 | 1035 | 7784 |
| *of which environment* | *226* | *270* | *823* | *380* | *548* | *610* | *92* | *667* | *10* | *453* | *215* | *218* | *190* | *313* | *801* | *5816* |
| *of which energy* | *92* | *118* | *322* | *140* | *184* | *169* | *30* | *179* | *7* | *165* | *82* | *87* | *50* | *109* | *234* | *1968* |
| Nuclear energy | 7 | 0 | 8 | 2 | 1 | 5 | 0 | 1 | 0 | 1 | 2 | 0 | 1 | 0 | 5 | 33 |
| *of which fission* | *5* | *0* | *7* | *1* | *1* | *2* | *0* | *0* | *0* | *1* | *1* | *0* | *1* | *0* | *2* | *21* |
| *of which fusion* | *1* | *0* | *0* | *0* | *0* | *1* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *2* |
| International role | 105 | 48 | 166 | 37 | 130 | 183 | 11 | 120 | 4 | 127 | 45 | 73 | 31 | 50 | 243 | 1373 |
| Innovation-SMEs | 47 | 24 | 113 | 32 | 77 | 75 | 25 | 84 | 15 | 41 | 44 | 30 | 28 | 44 | 91 | 770 |
| Human potential | 102 | 67 | 408 | 96 | 230 | 488 | 42 | 229 | 30 | 170 | 94 | 52 | 29 | 96 | 615 | 2748 |
| **TOTAL** | **2237** | **1641** | **6331** | **2441** | **4006** | **5155** | **1031** | **4953** | **167** | **3180** | **1536** | **1450** | **1335** | **2208** | **6525** | **44196** |

| | CANDIDATE AND ASSOCIATED COUNTRIES | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **BG** | **CY** | **CZ** | **EE** | **HU** | **LV** | **LT** | **MT** | **PL** | **RO** | **SK** | **SI** | **TR** | **IS** | **LI** | **NO** | **CH** | **IL** | **Total** |
| Quality of life | 64 | 25 | 192 | 64 | 235 | 50 | 54 | 3 | 59 | 265 | 68 | 86 | 10 | 74 | 1 | 381 | 405 | 270 | 2306 |
| Information society | 97 | 90 | 142 | 38 | 119 | 37 | 34 | 6 | 186 | 86 | 56 | 64 | 21 | 14 | 4 | 150 | 305 | 178 | 1627 |
| Sustainable growth | 34 | 14 | 160 | 9 | 105 | 18 | 13 | 2 | 176 | 77 | 55 | 73 | 5 | 12 | 10 | 198 | 226 | 124 | 1311 |
| Energy-environment | 71 | 35 | 131 | 61 | 126 | 21 | 29 | 6 | 218 | 88 | 64 | 70 | 24 | 34 | 5 | 280 | 238 | 99 | 1600 |
| *of which environment* | *52* | *27* | *110* | *48* | *104* | *20* | *23* | *6* | *186* | *66* | *58* | *60* | *17* | *34* | *2* | *241* | *175* | *88* | *1317* |
| *of which energy* | *19* | *8* | *21* | *13* | *22* | *1* | *6* | *0* | *32* | *22* | *6* | *10* | *7* | *0* | *3* | *39* | *63* | *11* | *283* |
| Nuclear energy | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 |
| *of which fission* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| *of which fusion* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *1* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *1* |
| International role | 12 | 3 | 8 | 4 | 16 | 3 | 4 | 7 | 39 | 2 | 8 | 7 | 11 | 1 | 0 | 27 | 18 | 12 | 182 |
| Innovation-SMEs | 7 | 4 | 23 | 16 | 25 | 7 | 8 | 1 | 33 | 24 | 11 | 13 | 0 | 5 | 0 | 15 | 4 | 0 | 200 |
| Human potential | 6 | 1 | 25 | 8 | 16 | 7 | 3 | | 25 | 9 | 14 | 5 | 1 | 6 | 0 | 36 | 46 | 38 | 246 |
| **TOTAL** | **291** | **172** | **681** | **200** | **644** | **143** | **146** | **25** | **943** | **345** | **295** | **300** | **72** | **146** | **20** | **1087** | **1243** | **726** | **7479** |

**TABLE 5A – CONTRACTS SIGNED BY COUNTRY: PARTICIPATIONS BY SPECIFIC PROGRAMME**

| | EUROPEAN UNION | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **BE** | **DK** | **DE** | **EL** | **ES** | **FR** | **IE** | **IT** | **LU** | **NL** | **AT** | **PT** | **FI** | **SV** | **UK** | **Total** |
| Quality of life | 179 | 178 | 611 | 95 | 302 | 529 | 89 | 392 | 1 | 363 | 67 | 79 | 144 | 239 | 744 | 4012 |
| Information society | 169 | 66 | 610 | 283 | 352 | 469 | 63 | 474 | 15 | 180 | 108 | 77 | 100 | 114 | 509 | 3589 |
| Sustainable growth | 147 | 79 | 755 | 129 | 262 | 595 | 57 | 435 | 5 | 259 | 98 | 75 | 108 | 199 | 553 | 3756 |
| Energy-environment | 107 | 120 | 448 | 133 | 206 | 438 | 44 | 281 | 4 | 230 | 79 | 70 | 82 | 119 | 460 | 2821 |
| *of which environment* | *54* | *64* | *268* | *81* | *130* | *298* | *31* | *186* | *2* | *130* | *55* | *42* | *53* | *78* | *285* | *1757* |
| *of which energy* | *53* | *56* | *180* | *52* | *76* | *140* | *13* | *95* | *2* | *100* | *24* | *28* | *29* | *41* | *175* | *1064* |
| Nuclear energy | 110 | 23 | 225 | 15 | 105 | 175 | 13 | 89 | 4 | 55 | 24 | 11 | 60 | 76 | 155 | 1137 |
| *of which fission* | *85* | *10* | *116* | *8* | *69* | *125* | *1* | *32* | *0* | *28* | *8* | *2* | *38* | *43* | *79* | *644* |
| *of which fusion* | *11* | *5* | *49* | *4* | *12* | *18* | *4* | *30* | *3* | *7* | *8* | *8* | *10* | *8* | *11* | *188* |
| International role | 21 | 16 | 60 | 20 | 32 | 53 | 4 | 45 | 0 | 28 | 10 | 12 | 13 | 4 | 75 | 393 |
| Innovation-SMEs | 40 | 22 | 96 | 53 | 114 | 104 | 8 | 147 | 4 | 47 | 22 | 45 | 18 | 33 | 79 | 832 |
| Human potential | 128 | 101 | 517 | 114 | 280 | 650 | 81 | 362 | 2 | 274 | 79 | 62 | 49 | 124 | 753 | 3576 |
| **TOTAL** | **901** | **605** | **3322** | **842** | **1650** | **3013** | **359** | **2225** | **35** | **1436** | **487** | **431** | **574** | **908** | **3328** | **20116** |

| | CANDIDATE AND ASSOCIATED COUNTRIES | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **BG** | **CY** | **CZ** | **EE** | **HU** | **LV** | **LT** | **MT** | **PL** | **RO** | **SK** | **SI** | **TR** | **IS** | **LI** | **NO** | **CH** | **IL** | **Total** |
| Quality of life | 11 | 0 | 40 | 12 | 31 | 6 | 5 | 0 | 44 | 2 | 14 | 10 | 1 | 14 | 0 | 88 | 110 | 69 | 457 |
| Information society | 23 | 11 | 32 | 13 | 18 | 8 | 5 | 1 | 29 | 11 | 10 | 16 | 2 | 6 | 0 | 60 | 112 | 47 | 404 |
| Sustainable growth | 1 | 2 | 25 | 0 | 17 | 4 | 4 | 0 | 32 | 10 | 11 | 15 | 0 | 4 | 1 | 61 | 64 | 21 | 272 |
| Energy-environment | 4 | 4 | 29 | 7 | 26 | 0 | 2 | 0 | 27 | 8 | 7 | 15 | 3 | 6 | 2 | 134 | 89 | 23 | 386 |
| *of which environment* | *3* | *4* | *22* | *5* | *20* | *0* | *2* | *0* | *20* | *6* | *3* | *7* | *3* | *6* | *1* | *87* | *62* | *16* | *267* |
| *of which energy* | *1* | *0* | *7* | *2* | *6* | *0* | *0* | *0* | *7* | *2* | *4* | *8* | *0* | *0* | *1* | *47* | *27* | *7* | *119* |
| Nuclear energy | 3 | 0 | 30 | 0 | 21 | 5 | 0 | 0 | 5 | 10 | 10 | 8 | 0 | 0 | 0 | 9 | 53 | 0 | 154 |
| *of which fission* | *0* | *0* | *20* | *0* | *9* | *0* | *0* | *0* | *3* | *0* | *4* | *4* | *0* | *0* | *0* | *3* | *36* | *0* | *79* |
| *of which fusion* | *2* | *0* | *5* | *0* | *7* | *5* | *0* | *0* | *0* | *8* | *4* | *2* | *0* | *0* | *0* | *0* | *11* | *0* | *44* |
| International role | 7 | 8 | 6 | 3 | 10 | 4 | 2 | 2 | 14 | 10 | 4 | 2 | 10 | 0 | 0 | 14 | 9 | 8 | 113 |
| Innovation-SMEs | 7 | 8 | 17 | 8 | 15 | 11 | 10 | 0 | 13 | 8 | 10 | 8 | 0 | 12 | 0 | 10 | 4 | 21 | 162 |
| Human potential | 7 | 1 | 21 | 7 | 29 | 6 | 1 | 1 | 44 | 6 | 5 | 10 | 0 | 2 | 0 | 47 | 63 | 50 | 300 |
| **TOTAL** | **63** | **34** | **200** | **50** | **167** | **44** | **29** | **4** | **208** | **65** | **67** | **88** | **16** | **44** | **3** | **423** | **504** | **239** | **2248** |

## TABLE 5B – CONTRACTS SIGNED BY COUNTRY: PARTICIPATIONS BY TYPE OF ACTION AND BY TYPE OF BENEFICIARY

| Number of participations by type of action | EUROPEAN UNION | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **BE** | **DK** | **DE** | **EL** | **ES** | **FR** | **IE** | **IT** | **LU** | **NL** | **AT** | **PT** | **FI** | **SV** | **UK** | **Total** |
| Shared-cost actions | 589 | 454 | 2427 | 626 | 1151 | 2035 | 255 | 1540 | 26 | 998 | 352 | 293 | 454 | 701 | 2190 | 14107 |
| *of which R&D projects* | *524* | *388* | *2181* | *554* | *982* | *1869* | *212* | *1344* | *25* | *858* | *324* | *240* | *425* | *648* | *1938* | *12512* |
| *of which demonstration projects* | *9* | *40* | *60* | *25* | *40* | *41* | *10* | *50* | *0* | *29* | *4* | *12* | *9* | *20* | *55* | *413* |
| *of which combined projects* | *5* | *8* | *32* | *9* | *16* | *18* | *7* | *27* | *0* | *5* | *1* | *3* | *3* | *11* | *21* | *173* |
| *of which support to infrastructures* | *1* | *0* | *14* | *1* | *6* | *10* | *1* | *4* | *0* | *6* | *1* | *0* | *1* | *3* | *12* | *60* |
| *of which cooperative research* | *14* | *5* | *40* | *18* | *39* | *39* | *6* | *43* | *0* | *31* | *7* | *10* | *4* | *8* | *45* | *309* |
| *of which exploratory awards* | *36* | *13* | *100* | *19* | *68* | *58* | *19* | *72* | *1* | *69* | *15* | *28* | *12* | *11* | *119* | *640* |
| Fellowships | 54 | 51 | 168 | 46 | 132 | 273 | 43 | 104 | 0 | 139 | 20 | 15 | 14 | 46 | 468 | 1573 |
| Support to networks | 125 | 78 | 423 | 93 | 163 | 360 | 44 | 261 | 2 | 181 | 57 | 55 | 54 | 108 | 428 | 2432 |
| Concerted actions | 24 | 11 | 30 | 9 | 21 | 47 | 6 | 23 | 0 | 28 | 7 | 10 | 18 | 16 | 59 | 309 |
| Accompanying measures | 133 | 56 | 365 | 108 | 246 | 349 | 26 | 352 | 8 | 131 | 51 | 80 | 49 | 63 | 259 | 2292 |
| **Total** | **925** | **650** | **3413** | **882** | **1713** | **3064** | **374** | **2280** | **36** | **1477** | **487** | **453** | **589** | **934** | **3404** | **20116** |

| Number of participations by type of action | BE | DK | DE | EL | ES | FR | IE | IT | LU | NL | AT | PT | FI | SV | UK | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Higher education | 342 | 179 | 954 | 257 | 514 | 584 | 193 | 621 | 0 | 500 | 164 | 131 | 189 | 370 | 1628 | 6626 |
| Research centres (including JRC) | 207 | 225 | 1085 | 231 | 447 | 1293 | 59 | 721 | 10 | 482 | 141 | 114 | 197 | 242 | 615 | 6069 |
| Enterprise sector | 275 | 161 | 1111 | 292 | 560 | 966 | 82 | 695 | 22 | 343 | 148 | 124 | 162 | 250 | 915 | 6106 |
| Others[29] | 77 | 40 | 172 | 62 | 129 | 170 | 25 | 188 | 3 | 111 | 34 | 62 | 26 | 46 | 170 | 1315 |
| **Total** | **901** | **605** | **3322** | **842** | **1650** | **3013** | **359** | **2225** | **35** | **1436** | **487** | **431** | **574** | **908** | **3328** | **20116** |

[29] "Others" covers all participations which could not be allocated to any of the first three categories.

| Number of participations by type of action | CANDIDATE AND ASSOCIATED COUNTRIES | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **BG** | **CY** | **CZ** | **EE** | **HU** | **LV** | **LT** | **MT** | **PL** | **RO** | **SK** | **SI** | **TR** | **IS** | **LI** | **NO** | **CH** | **IL** | **Tot.** |
| Shared-cost actions | 30 | 16 | 128 | 30 | 102 | 17 | 8 | 1 | 126 | 37 | 39 | 56 | 12 | 33 | 3 | 325 | 376 | 159 | 1498 |
| *of which R&D projects* | *27* | *16* | *116* | *21* | *94* | *13* | *8* | *1* | *121* | *37* | *38* | *49* | *12* | *24* | *3* | *303* | *364* | *144* | *1391* |
| *of which demonstration projects* | *0* | *0* | *0* | *0* | *1* | *0* | *0* | *0* | *0* | *0* | *0* | *1* | *0* | *0* | *0* | *2* | *5* | *0* | *9* |
| *of which combined projects* | *0* | *0* | *0* | *8* | *0* | *2* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *5* | *0* | *1* | *6* | *1* | *23* |
| *of which support to infrastructures* | *0* | *0* | *1* | *0* | *1* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *2* | *0* | *2* | *6* |
| *of which cooperative research* | *0* | *0* | *1* | *1* | *1* | *0* | *0* | *0* | *0* | *0* | *1* | *3* | *0* | *4* | *0* | *9* | *1* | *1* | *25* |
| *of which exploratory awards* | *0* | *0* | *10* | *0* | *5* | *2* | *0* | *0* | *5* | *0* | *0* | *3* | *0* | *0* | *0* | *8* | *0* | *11* | *44* |
| Fellowships | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 10 | 9 | 39 |
| Support to networks | 7 | 1 | 19 | 5 | 29 | 7 | 5 | 1 | 40 | 10 | 9 | 9 | 1 | 2 | 0 | 50 | 75 | 34 | 301 |
| Concerted actions | 0 | 1 | 6 | 1 | 4 | 1 | 1 | 1 | 4 | 1 | 2 | 3 | 2 | 1 | 0 | 7 | 7 | 6 | 48 |
| Accompanying measures | 26 | 16 | 43 | 14 | 32 | 18 | 15 | 1 | 37 | 17 | 17 | 20 | 1 | 8 | 0 | 27 | 36 | 34 | 362 |
| **Total** | **63** | **34** | **200** | **50** | **167** | **44** | **29** | **4** | **208** | **65** | **67** | **88** | **16** | **44** | **3** | **423** | **504** | **239** | **2248** |

| **Number of participations by type of action** | **BG** | **CY** | **CZ** | **EE** | **HU** | **LV** | **LT** | **MT** | **PL** | **RO** | **SK** | **SI** | **TR** | **IS** | **LI** | **NO** | **CH** | **IL** | **Tot.** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Higher education | 13 | 6 | 32 | 19 | 24 | 3 | 6 | 0 | 80 | 13 | 13 | 24 | 9 | 17 | 0 | 114 | 220 | 93 | 686 |
| Research centres (incl. JRC) | 23 | 4 | 85 | 8 | 76 | 18 | 6 | 0 | 68 | 28 | 27 | 32 | 5 | 9 | 0 | 138 | 155 | 62 | 744 |
| Enterprise sector | 16 | 12 | 53 | 12 | 38 | 8 | 4 | 2 | 31 | 12 | 17 | 23 | 1 | 11 | 3 | 154 | 119 | 57 | 573 |
| Others | 11 | 12 | 30 | 11 | 29 | 15 | 13 | 2 | 29 | 12 | 10 | 9 | 1 | 7 | 0 | 17 | 10 | 27 | 245 |
| **Total** | **63** | **34** | **200** | **50** | **167** | **44** | **29** | **4** | **208** | **65** | **67** | **88** | **16** | **44** | **3** | **423** | **504** | **239** | **2248** |

## TABLE 6: COOPERATION LINKS BETWEEN COUNTRIES IN THE CONTRACTS SIGNED

| | | European Union | | | | | | | | | | | | | | | | Candidate and associated countries | | | | | | | | | | | | | | | | | Total | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | BE | DK | DE | EL | ES | FR | IE | IT | LU | NL | AT | PT | FI | SV | UK | **Tot** | BG | CY | CZ | EE | HU | LV | LT | MT | PL | RO | SK | SI | TR | IS | LI | NO | CH | IL | | | |
| European Union | BE | 328 | 188 | 885 | 188 | 409 | 790 | 78 | 522 | 33 | 419 | 112 | 104 | 305 | 408 | 746 | **5515** | 11 | 8 | 105 | 9 | 51 | 3 | 4 | 3 | 61 | 27 | 23 | 30 | 2 | 8 | 0 | 111 | 191 | 37 | **6199** | BE | European Union |
| | DK | 188 | 235 | 542 | 116 | 327 | 384 | 89 | 374 | 14 | 372 | 92 | 88 | 180 | 317 | 692 | **4010** | 8 | 2 | 43 | 20 | 45 | 9 | 5 | 1 | 58 | 17 | 24 | 24 | 1 | 12 | 1 | 127 | 102 | 36 | **4545** | DK | |
| | DE | 885 | 542 | 2126 | 516 | 1352 | 2162 | 181 | 1617 | 162 | 1235 | 596 | 478 | 1020 | 1415 | 2448 | **16735** | 80 | 22 | 290 | 33 | 190 | 28 | 20 | 0 | 197 | 54 | 84 | 90 | 9 | 32 | 1 | 343 | 663 | 204 | **19075** | DE | |
| | EL | 188 | 116 | 516 | 524 | 329 | 667 | 63 | 501 | 29 | 251 | 114 | 100 | 125 | 211 | 555 | **4289** | 49 | 36 | 77 | 9 | 31 | 4 | 11 | 2 | 59 | 33 | 24 | 35 | 33 | 5 | 1 | 125 | 169 | 75 | **5067** | EL | |
| | ED | 409 | 327 | 1352 | 329 | 929 | 1341 | 115 | 928 | 64 | 488 | 210 | 319 | 551 | 654 | 1480 | **9496** | 68 | 7 | 89 | 18 | 55 | 7 | 8 | 0 | 66 | 30 | 36 | 36 | 18 | 25 | 2 | 166 | 260 | 93 | **10480** | ES | |
| | FR | 790 | 384 | 2162 | 667 | 1341 | 2022 | 185 | 1461 | 74 | 836 | 317 | 427 | 534 | 825 | 2259 | **14284** | 37 | 19 | 143 | 24 | 112 | 13 | 19 | 1 | 157 | 42 | 37 | 60 | 53 | 41 | 3 | 351 | 629 | 153 | **16178** | FR | |
| | IR | 78 | 89 | 181 | 63 | 115 | 185 | 81 | 119 | 12 | 122 | 37 | 43 | 74 | 103 | 314 | **1616** | 4 | 3 | 22 | 7 | 17 | 4 | 5 | 0 | 24 | 10 | 10 | 10 | 2 | 4 | 0 | 48 | 48 | 10 | **1844** | IE | |
| | IT | 522 | 374 | 1617 | 501 | 928 | 1461 | 119 | 1502 | 40 | 689 | 253 | 264 | 424 | 777 | 1554 | **11025** | 36 | 14 | 136 | 17 | 68 | 4 | 6 | 2 | 105 | 45 | 35 | 43 | 29 | 14 | 3 | 212 | 391 | 140 | **12325** | IT | |
| | LU | 33 | 14 | 162 | 29 | 64 | 74 | 12 | 40 | 5 | 24 | 29 | 20 | 65 | 89 | 66 | **726** | 6 | 3 | 7 | 3 | 7 | 4 | 3 | 0 | 5 | 6 | 4 | 4 | 0 | 2 | 0 | 4 | 6 | 6 | **796** | LU | |
| | NL | 419 | 372 | 1235 | 251 | 488 | 836 | 122 | 689 | 24 | 595 | 207 | 178 | 279 | 494 | 1161 | **7350** | 27 | 4 | 101 | 34 | 74 | 7 | 3 | 0 | 87 | 21 | 32 | 41 | 4 | 15 | 2 | 187 | 261 | 89 | **8339** | NL | |
| | AT | 112 | 92 | 596 | 114 | 210 | 317 | 37 | 253 | 29 | 207 | 183 | 87 | 162 | 231 | 350 | **2980** | 23 | 3 | 47 | 17 | 53 | 4 | 2 | 0 | 33 | 37 | 31 | 30 | 3 | 10 | 4 | 94 | 129 | 13 | **3513** | AT | |
| | PT | 104 | 88 | 478 | 100 | 319 | 427 | 43 | 264 | 20 | 178 | 87 | 160 | 151 | 246 | 398 | **3063** | 11 | 4 | 42 | 5 | 25 | 4 | 4 | 0 | 24 | 15 | 14 | 12 | 6 | 7 | 2 | 50 | 69 | 29 | **3386** | PT | |
| | FI | 305 | 180 | 1020 | 125 | 551 | 534 | 74 | 424 | 65 | 279 | 162 | 151 | 225 | 756 | 884 | **5735** | 25 | 1 | 71 | 16 | 32 | 7 | 12 | 0 | 51 | 15 | 22 | 21 | 3 | 17 | 0 | 105 | 99 | 26 | **6258** | FI | |
| | SV | 408 | 317 | 1415 | 211 | 654 | 825 | 103 | 777 | 89 | 494 | 231 | 246 | 756 | 369 | 1213 | **8108** | 8 | 2 | 71 | 43 | 36 | 9 | 11 | 0 | 64 | 15 | 17 | 18 | 0 | 20 | 1 | 166 | 161 | 50 | **8800** | SV | |
| | UK | 746 | 692 | 2448 | 555 | 1480 | 2259 | 314 | 1554 | 66 | 1161 | 350 | 398 | 884 | 1213 | 1850 | **15970** | 55 | 15 | 190 | 34 | 109 | 23 | 14 | 0 | 166 | 54 | 58 | 77 | 24 | 31 | 4 | 514 | 492 | 183 | **18013** | UK | |
| | **Tot** | **5515** | **4010** | **16735** | **4289** | **9496** | **14284** | **1616** | **11025** | **726** | **7350** | **2980** | **3063** | **5735** | **8108** | **15970** | **61018** | **448** | **143** | **1434** | **289** | **905** | **130** | **127** | **9** | **1157** | **421** | **451** | **531** | **187** | **243** | **24** | **2603** | **3670** | **1144** | **74934** | **Tot.** | |
| Candidate and associated countries | BG | 11 | 8 | 80 | 49 | 68 | 37 | 4 | 36 | 6 | 27 | 23 | 11 | 25 | 8 | 55 | **448** | 24 | 4 | 18 | 2 | 13 | 3 | 3 | 0 | 9 | 28 | 15 | 11 | 3 | 1 | 0 | 7 | 14 | 6 | **609** | BG | Candidate and associated countries |
| | CY | 8 | 2 | 22 | 36 | 7 | 19 | 3 | 14 | 3 | 4 | 3 | 4 | 1 | 2 | 15 | **143** | 4 | 4 | 3 | 2 | 4 | 2 | 3 | 2 | 3 | 5 | 2 | 5 | 1 | 2 | 0 | 5 | 4 | 15 | **209** | CY | |
| | CZ | 105 | 43 | 290 | 77 | 89 | 143 | 22 | 136 | 7 | 101 | 47 | 42 | 71 | 71 | 190 | **1434** | 18 | 3 | 90 | 11 | 31 | 5 | 4 | 0 | 42 | 12 | 29 | 15 | 1 | 1 | 0 | 25 | 44 | 6 | **1771** | CZ | |
| | EE | 9 | 20 | 33 | 9 | 18 | 24 | 7 | 17 | 3 | 34 | 17 | 5 | 16 | 43 | 34 | **289** | 2 | 2 | 11 | 26 | 7 | 13 | 4 | 0 | 13 | 2 | 4 | 7 | 0 | 2 | 0 | 20 | 11 | 5 | **418** | EE | |
| | HU | 51 | 45 | 190 | 31 | 55 | 112 | 17 | 68 | 7 | 74 | 53 | 25 | 32 | 36 | 109 | **905** | 13 | 4 | 31 | 7 | 31 | 4 | 4 | 1 | 24 | 22 | 17 | 17 | 1 | 2 | 0 | 15 | 28 | 18 | **1144** | HU | |
| | LV | 3 | 9 | 28 | 4 | 7 | 13 | 4 | 4 | 4 | 7 | 4 | 4 | 7 | 9 | 23 | **130** | 3 | 2 | 5 | 13 | 4 | 3 | 6 | 0 | 6 | 4 | 3 | 4 | 0 | 4 | 0 | 1 | 5 | 7 | **200** | LV | |
| | LT | 4 | 5 | 20 | 11 | 8 | 19 | 5 | 6 | 3 | 3 | 2 | 4 | 12 | 11 | 14 | **127** | 3 | 3 | 4 | 4 | 4 | 6 | 4 | 1 | 9 | 5 | 3 | 3 | 2 | 1 | 0 | 5 | 4 | 4 | **192** | LT | |
| | MT | 3 | 1 | 0 | 2 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **9** | 0 | 2 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | **18** | MT | |
| | PL | 61 | 58 | 197 | 59 | 66 | 157 | 24 | 105 | 5 | 87 | 33 | 24 | 51 | 64 | 166 | **1157** | 9 | 3 | 42 | 13 | 24 | 6 | 9 | 1 | 56 | 11 | 15 | 14 | 2 | 3 | 0 | 46 | 31 | 14 | **1456** | PL | |
| | RO | 27 | 17 | 54 | 33 | 30 | 42 | 10 | 45 | 6 | 21 | 37 | 15 | 15 | 15 | 54 | **421** | 28 | 5 | 12 | 2 | 22 | 4 | 5 | 1 | 11 | 32 | 12 | 8 | 1 | 1 | 1 | 9 | 13 | 3 | **591** | RO | |
| | SK | 23 | 24 | 84 | 24 | 36 | 37 | 10 | 35 | 4 | 32 | 31 | 14 | 22 | 17 | 58 | **451** | 15 | 2 | 29 | 4 | 17 | 3 | 3 | 0 | 15 | 12 | 24 | 8 | 0 | 1 | 1 | 9 | 18 | 3 | **615** | SK | |
| | SI | 30 | 24 | 90 | 35 | 36 | 60 | 10 | 43 | 4 | 41 | 30 | 12 | 21 | 18 | 77 | **531** | 11 | 5 | 15 | 7 | 17 | 4 | 3 | 0 | 14 | 8 | 8 | 32 | 1 | 2 | 1 | 17 | 21 | 10 | **707** | SI | |
| | TR | 2 | 1 | 9 | 33 | 18 | 53 | 2 | 29 | 0 | 4 | 3 | 6 | 3 | 0 | 24 | **187** | 3 | 1 | 1 | 0 | 1 | 0 | 2 | 1 | 2 | 1 | 0 | 1 | 2 | 0 | 0 | 1 | 7 | 2 | **212** | TR | |
| | IS | 8 | 12 | 32 | 5 | 25 | 41 | 4 | 14 | 2 | 15 | 10 | 7 | 17 | 20 | 31 | **243** | 1 | 1 | 2 | 2 | 2 | 4 | 1 | 0 | 2 | 1 | 1 | 2 | 0 | 27 | 0 | 30 | 9 | 3 | **331** | IS | |
| | LI | 0 | 1 | 1 | 1 | 2 | 3 | 0 | 3 | 0 | 2 | 4 | 2 | 0 | 1 | 4 | **24** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 2 | 0 | **31** | LI | |
| | NO | 111 | 127 | 343 | 125 | 166 | 351 | 48 | 212 | 4 | 187 | 94 | 50 | 105 | 166 | 514 | **2603** | 7 | 3 | 26 | 20 | 15 | 1 | 5 | 0 | 46 | 9 | 9 | 17 | 1 | 30 | 1 | 217 | 70 | 16 | **3096** | NO | |
| | CH | 191 | 102 | 663 | 169 | 260 | 629 | 48 | 391 | 6 | 261 | 129 | 69 | 99 | 161 | 492 | **3670** | 14 | 4 | 44 | 11 | 28 | 5 | 4 | 2 | 31 | 13 | 18 | 21 | 7 | 9 | 2 | 70 | 175 | 34 | **4162** | CH | |
| | IL | 37 | 36 | 204 | 75 | 93 | 153 | 10 | 140 | 6 | 89 | 13 | 29 | 26 | 50 | 183 | **1144** | 6 | 15 | 6 | 5 | 18 | 7 | 4 | 0 | 14 | 3 | 3 | 10 | 2 | 3 | 0 | 16 | 34 | 72 | **1362** | IL | |
| Total | | **6199** | **4545** | **19075** | **5067** | **10480** | **16178** | **1844** | **12325** | **796** | **8339** | **3513** | **3386** | **6258** | **8800** | **18013** | **74934** | **609** | **206** | **1773** | **418** | **1144** | **200** | **192** | **18** | **1455** | **591** | **615** | **707** | **212** | **332** | **31** | **3097** | **4162** | **1362** | **76948** | Total | |
| | | BE | DK | DE | EL | ES | FR | IE | IT | LU | NL | AT | PT | FI | SV | UK | **Tot** | BG | CY | CZ | EE | HY | LV | LT | MT | PL | RO | SK | SI | TR | IS | LI | NO | CH | IL | Total | | |
| | | European Union | | | | | | | | | | | | | | | | Candidate and associated countries | | | | | | | | | | | | | | | | | | | |

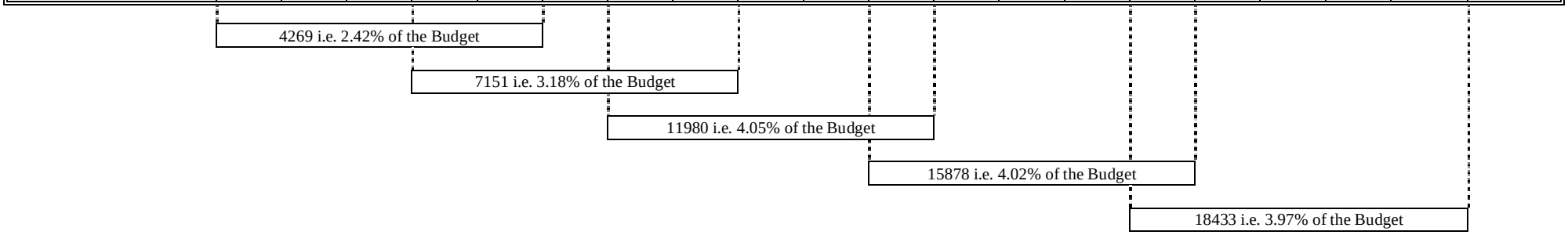
**TABLE 7: FUNDING OF 5TH FRAMEWORK PROGRAMME**

| | **Amount 1999-2002** | **Commitment 2000** |
|---|---|---|
| Quality of life and management of living resources | 2413 | 568,6 |
| User-friendly information society | 3600 | 876,3 |
| Competitive and sustainable growth | 2705 | 652,1 |
| Energy, environment and sustainable development | 2125 | 485,4 |
| *Environment and sustainable development* | *1083* | *250,6* |
| *Energy* | *1042* | *234,8* |
| Confirming the international role of Community research | 475 | 115,7 |
| Promotion of innovation and encouragement of SME participation | 363 | 99,9 |
| Improving human research potential and the socio-economic knowledge base | 1280 | 309,1 |
| Direct action (JRC) | 739 | 187,5 |
| **Total for 5th EC Framework Programme** | **13700** | **3294,7** |
| Controlled thermonuclear fusion | 788 | 181,8 |
| Nuclear fission | 191 | 84,8 |
| Direct action (JRC) | 281 | 72,5 |
| **Total for 5th Euratom Framework Programme** | **1260** | **339,1** |
| **TOTAL for 5th EC + Euratom Framework Programmes** | **14960** | **3633,7** |

## TABLE 8A: COMMUNITY RESEARCH COMMITMENTS OVER THE PERIOD 1984-2002 (CURRENT PRICES)

Situation on 4.07.01

| YEARS | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 00 | 01[30] | 02[31] | TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FP 1984-87 | 593,0 | 735,0 | 874,0 | 701,8 | 260,8 | 101,1 | 4,9 | | | | | | | | | | | | | 3270,6 |
| FP 1987-91 | | | | 188,1 | 810,6 | 1241,3 | 1596,9 | 1270,7 | 230,9 | 14,8 | 3,9 | 0,2 | | | | | | | | 5357,4 |
| FP 1990-94 | | | | | | | | 296,0 | 2160,5 | 2079,5 | 2014,7 | 1,0 | | | | | | | | 6551,7 |
| FP 1994-98[32] | | | | | | | | | | | | 2982,5 | 3153,5 | 3485,6 | 3499,3 | | | | | 13120,9 |
| FP 1998-02 | | | | | | | | | | | | | | | | 3325,1 | 3633,7 | 3920,0 | 4055,0 | 14933,8 |
| RTD PROGRAMMES | 593,0 | 735,0 | 874,0 | 889,9 | 1071,4 | 1342,4 | 1601,8 | 1566,7 | 2391,4 | 2094,3 | 2018,6 | 2983,7 | 3153,5 | 3485,6 | 3499,3 | 3325,1 | 3633,7 | 3920,0 | 4055,0 | 43234,4 |
| PAS | | | | 49,4 | 56,6 | 69,8 | 113,1 | 168,8 | 308,4 | 440,2 | 571,8 | 2,1 | | | | | | | | 1780,2 |
| RTD + PAS | 593,0 | 735,0 | 874,0 | 939,3 | 1128,0 | 1412,2 | 1714,9 | 1735,5 | 2699,8 | 2534,5 | 2590,4 | 2985,8 | 3153,5 | 3485,6 | 3499,3 | 3325,1 | 3633,7 | 3920,0 | 4055,0 | 45014,6 |
| SPRINT | | | | | | | 16,0 | 16,0 | 17,0 | | | | | | | | | | | 49,0 |
| ECSC | | | | | | | 17,5 | 17,5 | 17,5 | 17,5 | 17,5 | | | | | | | | | 87,5 |
| 80% of THERMIE | | | | | | | 36,0 | 118,4 | 128,9 | 139,2 | 145,6 | | | | | | | | | 568,1 |
| Total Research[33] | 593,0 | 735,0 | 874,0 | 939,3 | 1128,0 | 1412,2 | 1784,4 | 1887,4 | 2863,2 | 2691,2 | 2753,5 | 2985,8 | 3153,5 | 3485,6 | 3499,3 | 3325,1 | 3633,7 | 3920,0 | 4055,0 | 45719,2 |



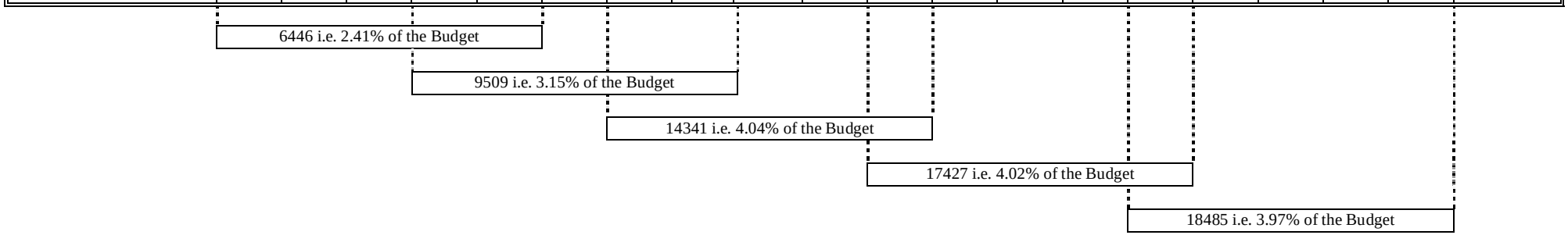

| EC BUDGET (current prices) | 28905 | 29925 | 35842 | 38392 | 43080 | 42569 | 45057 | 56111 | 61232 | 67760 | 65929 | 75355 | 82125 | 85028 | 86523 | 91604 | 91667 | 94551 | 99551 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RTD programme as % of Budget | 2,1 | 2,5 | 2,4 | 2,3 | 2,5 | 3,2 | 3,6 | 2,8 | 3,9 | 3,1 | 3,1 | 4,0 | 3,8 | 4,1 | 4,0 | 3,6 | 4,0 | 4,1 | 4,1 |
| Total research as % of Budget | 2,1 | 2,5 | 2,4 | 2,4 | 2,6 | 3,3 | 4,0 | 3,4 | 4,7 | 4,0 | 4,2 | 4,0 | 3,8 | 4,1 | 4,0 | 3,6 | 4,0 | 4,1 | 4,1 |

30 Budget for 2001.
31 Estimates for 2002.
32 The amounts for the 1994-98 FP are those adopted following EU enlargement.
33 RDT + THERMIE + ECSC + SPRINT + PAS.

## TABLE 8B: COMMUNITY RESEARCH COMMITMENTS OVER THE PERIOD 1984-2002 (CONSTANT 2000 PRICES)

Situation on 4.07.2001

| YEARS | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 00 | 01 [34] | 02 [35] | TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FP 1984-87 | 986,7 | 1153,8 | 1326,3 | 1030,5 | 369,9 | 136,4 | 6,3 | | | | | | | | | | | | | 5009,9 |
| FP 1987-91 | | | | 276,2 | 1149,8 | 1675,2 | 2063,2 | 1561,1 | 274,2 | 17,3 | 4,5 | 0,2 | | | | | | | | 7021,7 |
| FP 1990-94 | | | | | | | | 363,6 | 2565,9 | 2435,0 | 2315,7 | 1,1 | | | | | | | | 7681,3 |
| FP 1994-98 [36] | | | | | | | | | | | | 3385,4 | 3465,4 | 3727,9 | 3679,6 | | | | | 14258,3 |
| FP 1998-02 | | | | | | | | | | | | | | | | 3413,9 | 3633,7 | 3850,7 | 3906,6 | 14804,9 |
| RTD PROGRAMMES | 986,7 | 1153,8 | 1326,3 | 1306,7 | 1519,7 | 1811,6 | 2069,5 | 1924,7 | 2840,1 | 2452,3 | 2320,2 | 3386,7 | 3465,4 | 3727,9 | 3679,6 | 3413,9 | 3633,7 | 3850,7 | 3906,6 | 48776,1 |
| PAS | | | | 72,5 | 80,3 | 94,2 | 146,1 | 207,4 | 366,3 | 515,5 | 657,2 | 2,4 | | | | | | | | 2141,9 |
| RDT+PAS | 986,7 | 1153,8 | 1326,3 | 1379,2 | 1600,0 | 1905,8 | 2215,6 | 2132,1 | 3206,4 | 2967,8 | 2977,4 | 3389,1 | 3465,4 | 3727,9 | 3679,6 | 3413,9 | 3633,7 | 3850,7 | 3906,6 | 50918,0 |
| SPRINT | | | | | | | 20,7 | 19,7 | 20,2 | | | | | | | | | | | 60,6 |
| ECSC | | | | | | | 22,6 | 21,5 | 20,8 | 20,5 | 20,1 | | | | | | | | | 105,5 |
| 80% of THERMIE | | | | | | | 46,5 | 145,5 | 153,1 | 163,0 | 167,4 | | | | | | | | | 675,5 |
| Total Research [37] | 986,7 | 1153,8 | 1326,3 | 1379,2 | 1600,0 | 1905,8 | 2305,4 | 2318,8 | 3400,5 | 3151,3 | 3164,9 | 3389,1 | 3465,4 | 3727,9 | 3679,6 | 3413,9 | 3633,7 | 3850,7 | 3906,6 | 51759,6 |




| EC BUDGET (2000 prices) | 48095 | 46978 | 54388 | 56376 | 61106 | 57448 | 58213 | 68932 | 72722 | 79344 | 75780 | 85533 | 90247 | 90939 | 90981 | 94049 | 91667 | 92879 | 95907 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RTD programmes as % of Budget | 2,1 | 2,5 | 2,4 | 2,3 | 2,5 | 3,2 | 3,6 | 2,8 | 3,9 | 3,1 | 3,1 | 4,0 | 3,8 | 4,1 | 4,0 | 3,6 | 4,0 | 4,1 | 4,1 |
| Total research as % of Budget | 2,1 | 2,5 | 2,4 | 2,4 | 2,6 | 3,3 | 4,0 | 3,4 | 4,7 | 4,0 | 4,2 | 4,0 | 3,8 | 4,1 | 4,0 | 3,6 | 4,0 | 4,1 | 4,1 |
| Deflation factors [38] | 0,601 | 0,637 | 0,659 | 0,681 | 0,705 | 0,741 | 0,774 | 0,814 | 0,842 | 0,854 | 0,87 | 0,881 | 0,91 | 0,935 | 0,951 | 0,974 | **1,000** | 1,018 | 1,038 |
| Annual inflation (%) | | 6,0 | 3,5 | 3,3 | 3,6 | 5,1 | 4,5 | 5,2 | 3,5 | 1,4 | 1,9 | 1,3 | 3,3 | 2,7 | 1,7 | 2,4 | 2,7 | 1,8 | 2,0 |

34 Budget for 2001.
35 Estimates for 2002.
36 The amounts for the 1994-98 FP are those adopted following EU enlargement.
37 RDT + THERMIE + ECSC + SPRINT + PAS.
38 The deflation factors used from 1995 take account of the enlargement of the Union from 12 to 15 Member States (COM(96)65).

**TABLE 9: COUNTRY CODES**

| | |
|---|---|
| **European Union** | |
| BE | Belgium |
| DK | Denmark |
| DE | Germany |
| EL | Greece |
| ES | Spain |
| FR | France |
| IE | Ireland |
| IT | Italy |
| LU | Luxembourg |
| NL | Netherlands |
| AT | Austria |
| PT | Portugal |
| FI | Finland |
| SV | Sweden |
| UK | United Kingdom |
| **Candidate countries and associated countries** | |
| BG | Bulgaria |
| CY | Cyprus |
| CZ | Czech Republic |
| EE | Estonia |
| HU | Hungary |
| LV | Latvia |
| LT | Lithuania |
| MT | Malta |
| PL | Poland |
| RO | Romania |
| SK | Slovakia |
| SI | Slovenia |
| TR | Turkey |
| IS | Iceland |
| LI | Liechtenstein |
| NO | Norway |
| CH | Switzerland |
| IL | Israel |

## ANNEX II: Main documents of relevance to Community research activities

COM(2000) 6 of 18 January 2000:

Communication from the Commission to the Council, the European Parliament, the Economic and Social Committee and the Committee of the Regions *"Towards a European research area"*

COM(2000) 567 of 20 September 2000:

Communication from the Commission to the Council and the European Parliament *"Innovation in a knowledge-driven economy"*

COM(2000) 612 of 4 October 2000:

Communication from the Commission to the Council, the European Parliament, the Economic and Social Committee and the Committee of the Regions *"Making a reality of the European Research Area: Guidelines for EU research activities (2002-2006)"*

COM(2001) 94 of 21 February 2001:

Proposal for a Decision of the European Parliament and of the Council concerning the multiannual framework programme 2002-2006 of the European Community for research, technological development and demonstration activities aimed at contributing towards the creation of the European Research Area

Proposal for a Council Decision concerning the multiannual framework programme 2002-2006 of the European Atomic Energy Community (Euratom) for research and training activities aimed at contributing towards the creation of the European Research Area

COM(2001) 279 of 30 May 2001:

Proposals for Council Decisions concerning the specific programmes for implementing the Framework Programme 2002-2006 of the European Community for research, technological development and demonstration activities

Proposals for Council Decisions concerning the specific programmes for implementing the Framework Programme 2002-2006 of the European Atomic Energy Community for research and training activities

COM(2001) 282 of 30 May 2001:

Communication from the Commission to the Council and the European Parliament *"The Framework Programme and the European Research Area: application of Article 169 and the networking of national programmes"*

COM(2001) 331 of 20 June 2001:

Communication from the Commission to the Council and the European Parliament *"A mobility strategy for the European Research Area"*

COM(2001) 346 of 25 June 2001:

Communication from the Commission *"The international dimension of the European Research Area"*

COM(2001) 549 of 3 October 2001

Communication from the Commission *"The regional dimension of the European Research Area"*

SEC(2000) 1973 of 14 November 2000:

Commission staff working paper *"Science, society and the citizen in Europe"*

SEC(2001) 356 of 27 February 2001:

Commission staff working paper *"A European Research Area for infrastructures"*

SEC(2001) 771 of 15 May 2001:

Commission staff working paper *"Women and Science: the gender dimension as a leverage for reforming science"*

SEC(2001) 1002 of 20 June 2001:

Commission staff working paper *"Progress report on benchmarking of national research policies"*

COM(2001) 500 of 10 September 2001:

Proposal for a Decision of the European Parliament and of the Council concerning the rules for the participation of undertakings, research centres and universities and for the dissemination of research results for the implementation of the European Community framework programme 2002-2006